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## **Weathering the Storm**

**Agricultural Development, Investment, and Poverty in Africa  
Following the Recent Food Price Crisis**

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## **INTERNATIONAL FOOD POLICY RESEARCH INSTITUTE**

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## **ABSTRACT**

At the national level, dozens of African countries have pledged to implement the Comprehensive Africa Agriculture Development Programme (CAADP) of the New Partnership for Africa's Development (NEPAD) and the African Union (AU). This African-led plan aims to stimulate agriculture on the continent to achieve the first Millennium Development Goal (MDG1) of halving poverty and hunger by 2015. To do so, countries are expected to pursue 6 percent average annual agriculture growth at the national level, allocate 10 percent of national budgets to the agricultural sector, and improve overall policy efficiency through peer-review and accountability. The purpose of this paper is to evaluate trends in agricultural development, performance, and spending in Africa and to track corresponding progress in key poverty and hunger indicators following the recent food price crisis. The reason for tracking this information is that the recent food price crisis has the potential to derail the progress made toward reducing poverty and hunger in many African countries. This paper draws on policy research results in the literature to highlight some of the strategic policy options available to African governments for accelerating agricultural growth in line with the principles of CAADP. In this regard, the paper provides information on CAADP's agenda by reviewing the progress of implementation and performance against a number of key benchmarks.

**Keywords:** CAADP, Millennium Development Goals, food prices, African agriculture, trends, expenditures

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## **ABBREVIATIONS AND ACRONYMS**

AU	African Union
CAADP	Comprehensive Africa Agriculture Development Programme
COFOG	Classifications of the Functions of Government
COMESA	Common Market for Eastern and Southern Africa
CPI	Consumer Price Index
ECOWAS	Economic Community of West African States
FAO	Food and Agriculture Organization of the United Nations
FEWSNET	Famine Early Warning System
G8	Group of Eight
GDP	Gross Domestic Product
IMF	International Monetary Fund
MDGs	Millennium Development Goals
NEPAD	New Partnership for Africa's Development
ODA	Official Development Assistance
PEFA	Public Expenditure and Financial Accountability
R&D	Research and Development
ReSAKSS	Regional Strategic Analysis and Knowledge Support System
SADC	Southern African Development Community
SSA	Sub-Saharan Africa
UN	United Nations
US	United States
USAID	United States Agency for International Development





# 1. INTRODUCTION

Agriculture is crucial for development in Africa, because the majority of the population lives in rural areas and at least 70 percent of the workforce is engaged in agriculture. In many African countries, growth in agriculture is the most effective strategy for reducing poverty and promoting overall economic growth (Diao et al. 2007).

The period covered in this paper was, in many ways, a positive year for African agriculture. The G8 Summit, held in July 2009 in Italy, recognized the importance of agriculture for development and the critical need to increase financial and technical support to global agriculture and food security amid emerging challenges, such as the global economic crisis. Leaders at the summit issued an official statement on global food insecurity and pledged to mobilize US\$20 billion to tackle the issue in the next three years. At the national level, dozens of African countries have pledged to implement the Comprehensive Africa Agriculture Development Programme (CAADP) of the New Partnership for Africa's Development (NEPAD) and the African Union (AU). This African-led plan aims to stimulate agriculture on the continent in order to achieve the first Millennium Development Goal (MDG1) of halving poverty and hunger by 2015. To do so, countries are expected to pursue 6 percent average annual agriculture growth at the national level, allocate 10 percent of national budgets to the agricultural sector, and improve overall policy efficiency through peer review and accountability.

In addition, many African governments are now allocating more resources to agriculture. At the continental level, the share of agricultural spending in governments' total expenditures has increased by 75 percent between 2000 and 2005 with eight African countries allocating at least 10 percent of their budgets to the sector. Economic growth has also increased in Sub-Saharan Africa (SSA), from an annual average of approximately 3 percent in the 1990s and early 2000s to nearly 5 percent from 2005 to 2008. Agricultural growth has also spread to more countries (Badiane 2008). Between 2001 and 2003, only five countries—Angola, Mali, Mozambique, Namibia, and Sudan—had achieved agricultural growth rates at or above 6 percent. By 2005, the number had grown to nine countries: Angola, Burkina Faso, Republic of the Congo, Eritrea, Ethiopia, Gambia, Guinea-Bissau, Nigeria, and Senegal. In 2007, seven countries met the CAADP targeted 6 percent agricultural growth rate and 10 countries met it in 2008. In addition, actual cereal output has increased recently, partly in response to higher food prices. This increase is projected to continue in 2010.

Yet these positive signs over the past few years have been coupled with increased volatility and uncertainty in agricultural markets. The food crisis, which propelled international food prices to triple their 2003 levels, peaked in mid-2008. Then prices fell dramatically in the latter half of that year, as the international recession set in. These back-to-back crises have left poor farmers in Africa at the mercy of increased price volatility and have given them less access to resources, credit, and social protection. Moreover, as this paper shows, the food price crisis has the potential to derail the progress made toward reducing poverty and hunger in many African countries.

The purpose of this paper is to evaluate trends in agricultural development, performance, and spending in Africa and to track corresponding progress in key poverty and hunger indicators following the recent food price crisis. This paper also draws on policy research results in the literature to highlight some of the strategic policy options available to African governments for accelerating agricultural growth in line with CAADP's principles. In this regard, the paper provides information on the CAADP agenda by reviewing the progress of implementation and performance against a number of key benchmarks. The paper begins by reviewing recent trends in agricultural development over the past year, including progress with CAADP process and challenges posed by volatile food prices. It then reviews resource flows to the agricultural sector by governments and donors and reviews whether these flows have been of sufficient quantity and quality. The paper goes on to report recent agricultural and economic performance indicators, including growth, agricultural productivity, and trade trends, before reviewing recent progress made at the regional and national levels toward poverty reduction and hunger alleviation in the context of volatile prices since 2008. The paper concludes with policy recommendations and a summary of overall trends.

## **2. RECENT TRENDS IN AGRICULTURAL DEVELOPMENT IN AFRICA**

### **Progress in the Agricultural Sector: Implementation of the Comprehensive Africa Agriculture Development Programme (CAADP)**

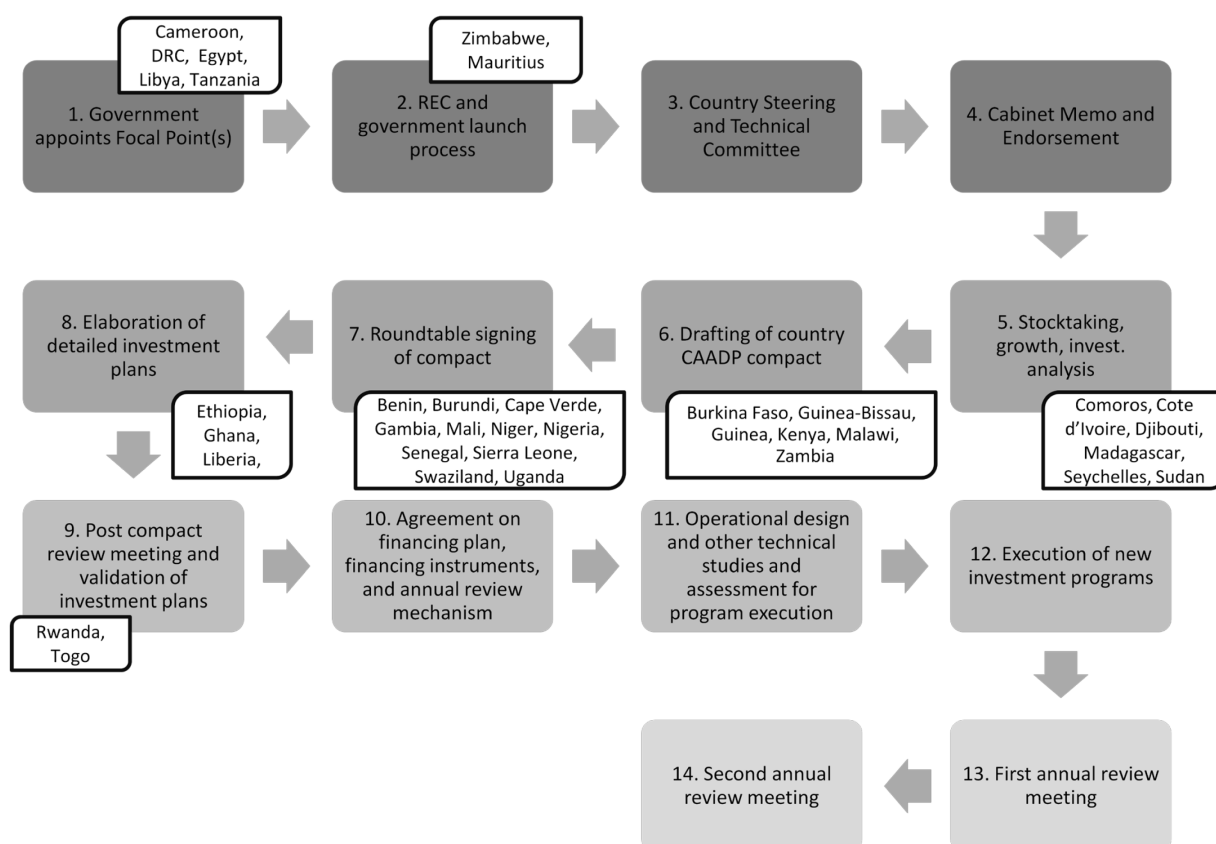
Although several challenges to the agriculture sector in Africa and the world emerged from 2008 to early 2009, there were significant gains, in particular at the institutional and political levels. The African Union (AU) adopted CAADP in June 2003 at the AU Summit in Maputo, Mozambique. The CAADP framework sets the achievement of 6 percent annual agricultural growth as its main goal. Attendees also acknowledged that inadequate investment in the sector was a key constraint on agricultural productivity and growth rates. Thus, African governments pledged to increase agricultural spending to at least 10 percent of total government budgetary resources by 2008. These commitments explicitly placed public agricultural spending at the center of national growth and poverty-reduction strategies. These strategies are aimed at putting countries on track toward achieving the first Millennium Development Goal (MDG1) of halving poverty and hunger by 2015.

At the country level, CAADP implementation is primarily a process of aligning national agricultural policies, strategies, and investments with CAADP principles and targets. The process builds on each country's ongoing efforts and is led by national governments and key stakeholders, with coordination by the Regional Economic Communities (RECs), the secretariat of the New Partnership for Africa's Development (NEPAD), and the AU. Each country, in collaboration with key partners and experts, conducts several tasks that lead to a Roundtable meeting. Then the country signs its own CAADP compact, which specifies long-term investment commitments for agricultural growth and development (NEPAD 2005). The steps include

1. taking stock of the country's ongoing agricultural development efforts and identifying gaps that need to be filled to help increase growth and reduce poverty and hunger;
2. specifying the strategic options for and sources of poverty-reducing growth to guide long-term development efforts in the agricultural sector;
3. estimating long-term funding needs to exploit the growth and poverty-reduction potential associated with the identified options and sources of growth; and
4. identifying review, dialogue, and knowledge mechanisms to facilitate the transition toward evidence-based and outcome-oriented strategy planning and implementation, thereby ensuring better outcomes.

Since CAADP's ratification, dozens of countries have begun the implementation process; sixteen of those countries—Benin, Burundi, Cape Verde, Ethiopia, Gambia, Ghana, Liberia, Mali, Niger, Nigeria, Rwanda, Senegal, Swaziland, Sierra Leone, Togo, and Uganda—have signed their CAADP country compacts and are now moving on to the post-compact stages (Figure 1). Several other countries are scheduled to sign their CAADP compacts in 2010.

**Figure 1. Country CAADP process and country status, 2010**



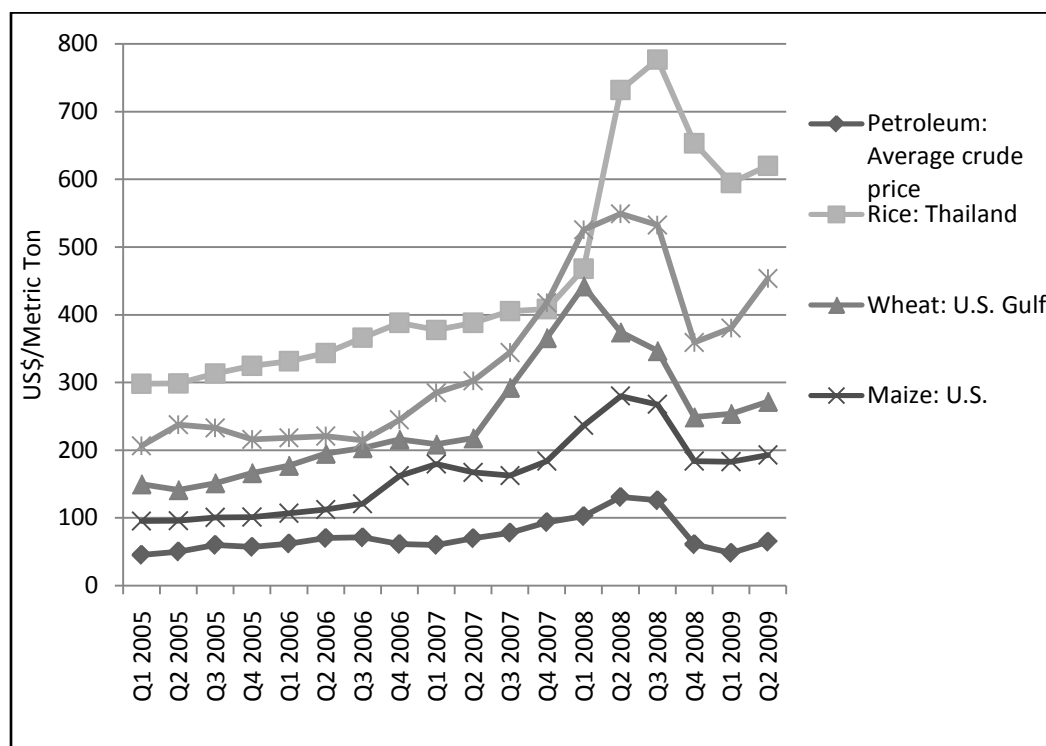
Source: Regional Strategic Analysis and Knowledge Support System (ReSAKSS) 2009, <http://www.nepad.caadp.net> 2009.

## Threats to the Agricultural Sector: High and Volatile Food Prices

The year 2008 was one of extreme variability for international food prices. In the first half of the year, prices increased for nearly every agricultural commodity (von Braun 2008a). For instance, “at their peaks in the second quarter of 2008, world prices of wheat and maize were three times higher than at the beginning of 2003, and the price of rice was five times higher” (von Braun 2008a, 1). The Food and Agriculture Organization of the United Nations (FAO) reported that as of mid-2008, the global food price index had shot up nearly 40 percent from the previous year (FAO 2008b). This climb in global food prices was driven by increases of 60 to 165 percent in the prices of key crops, such as maize, wheat, soybeans, and rice during the same period (Figure 2). Oil prices also rose sharply.

Starting in mid- to late-2008, international food price levels fell by 30 to 40 percent (von Braun 2008a). However, these declines do not appear to have been sufficient enough to return prices to their pre-2008 levels, as shown in Figure 2. Although there was a small production response to the higher prices, these reductions in food prices occurred farther and faster than can be explained through production gains alone. Rather, the price slide can be explained by other factors, such as the financial crisis, the fall in crude oil prices, and the appreciation of the U.S. dollar (FAO 2008b). Rather than returning global food markets back to normal, the price slide’s arrival on the heels of the price spike, along with the declining availability of credit and employment, has actually made food security more precarious. The dominant characteristic of agricultural markets is now price uncertainty.

**Figure 2. Trends in real international prices of key cereals: First quarter 2005 to second quarter 2009**



Source: International Monetary Fund (IMF) 2008. Data are deflated by the U.S. gross domestic product (GDP) deflator.  
Notes: Q1 = First quarter; Q2 = Second quarter

### *Causes of the 2008 Food Price Crisis*

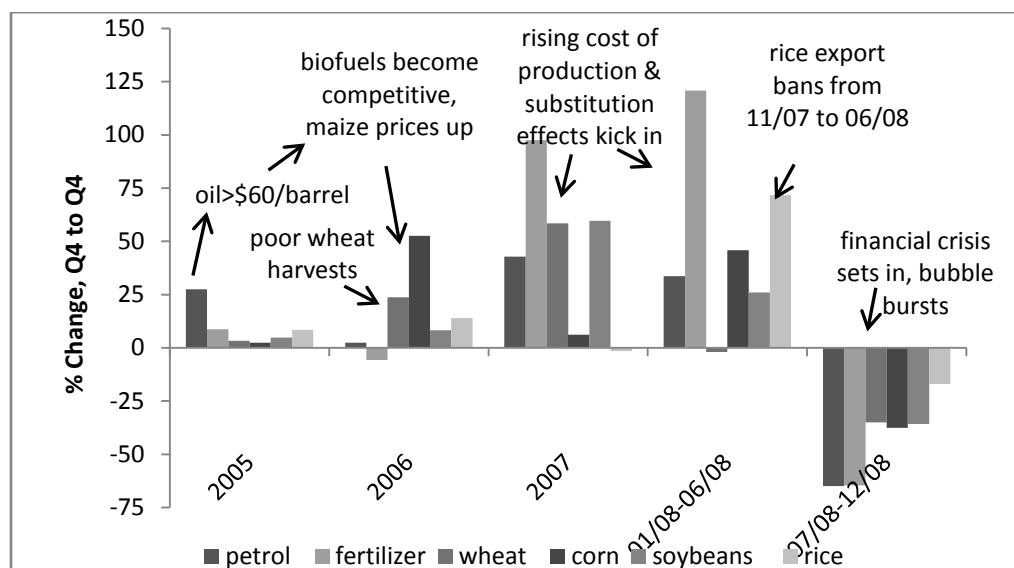
The rapid surge in the prices of key staples prompted a great deal of concern in developing countries and the international community, as well as an urgent search for the causes. Although accounts differ as to which factors were the leading causes, most international experts broadly agree with the “perfect storm” hypothesis—that a range of interacting factors caused the price surge. These factors include

- rapid growth in demand from China and India,
- financial market speculation,
- hoarding (export restrictions),
- weather shocks,
- depreciation of the U.S. dollar,
- rising oil prices,
- biofuels,
- agricultural productivity decline, and
- decline of stocks.

Figure 3 provides some summary evidence that is broadly consistent with the causes listed above. Oil prices were the first to rise, which, in turn, made biofuels profitable, leading to a rise in the price of maize in 2006. Bad wheat harvests in several major producing countries led to a moderate rise in wheat

prices in 2006, but other prices were mostly stable. In 2007, however, rising oil and fertilizer costs contributed to rising production costs, and price increases in maize and land reallocation from soybeans to maize undoubtedly induced substitution price effects. The major change in 2008 was the advent of export bans and panic buying in international markets, especially in rice. Meanwhile, fertilizer and oil costs rose in the first half of 2008. In the second half of 2008, the food price bubble burst, major harvests were much improved, and the financial crisis set in. All of these factors contributed to a sharp fall in prices.

**Figure 3. The timing of commodity price rises and their associated causes, 2005–2008**



Source: Headey and Fan 2008.

### *The Impact of the 2008 Global Food Crisis in Africa*

The rise in international food prices understandably caused considerable concern around the globe. This concern was certainly evident in Africa for several reasons. First, as the world's poorest region, Africa already suffers from high rates of malnutrition (see Section 4), which makes the impact of any reductions in food consumption much more severe. Second, the typical African household spends 50 to 70 percent of its budget on food (von Braun, et al. 2008). Third, although Africa is mostly rural, low agricultural productivity means that many rural African households may still be net food consumers rather than net producers. Add to that the fact that Africa's urban population has soared in recent decades, particularly in countries like Nigeria, and it is clear that many Africans are highly vulnerable to food inflation (von Braun 2008b). Because many countries have been unable to meet domestic demand for food, social unrest and riots have ensued in places such as Burkina Faso, Cameroon, Côte d'Ivoire, Egypt, and Senegal (Ngongl 2008). And yet in other countries, the transmission of high international food prices has been minimal.

The reasons for this variation in the effects of rising international food prices are quite complex. African countries differ greatly in the following:

- agricultural production (staples versus cash crops)
- the number of net food consumers
- dietary diversity
- dependence on cereals in general and cereal imports in particular
- the extent to which the cost of higher food imports has been offset by rising commodity exports and ample foreign reserves

- the ability of African governments to mitigate the transmission of international prices into domestic markets through exchange rate adjustments or tariff reductions
- the extent to which local events interact with global food inflation

## **Domestic Food Prices**

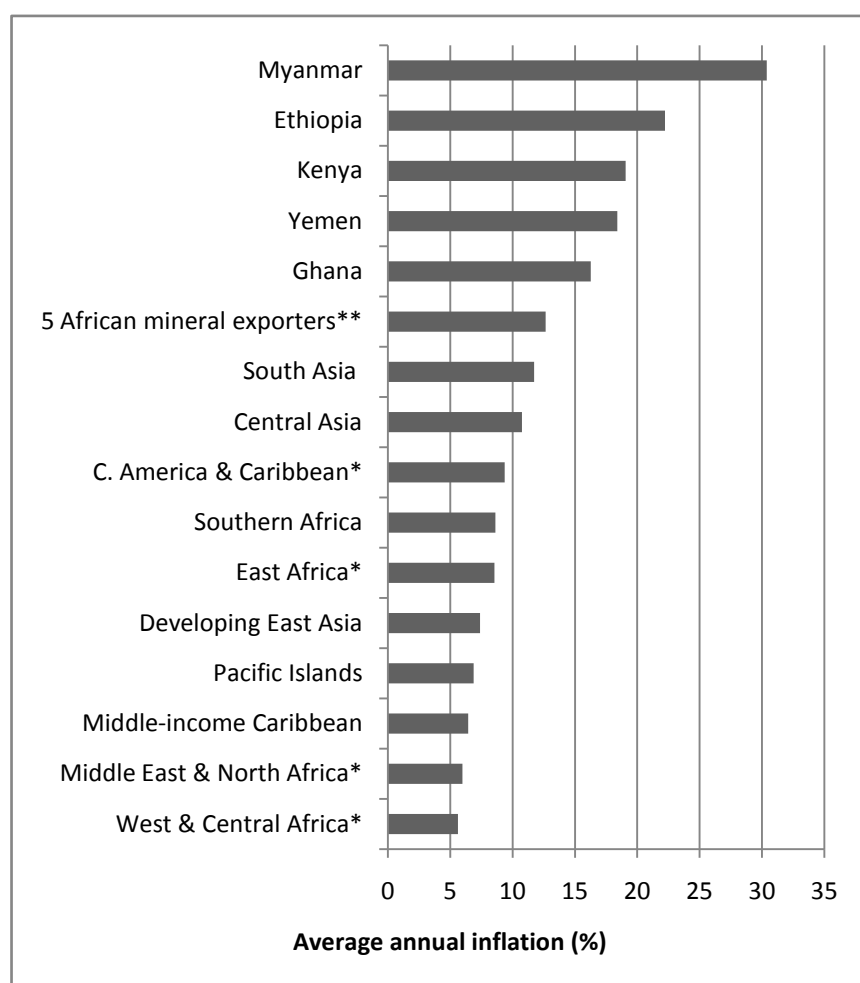
National and regional factors have also been important in driving domestic food prices. The degree to which a country's or region's markets are integrated with global markets can determine how much of the international price spike is transmitted to local markets (Benson et al. 2008). If a country is isolated, then the global food crisis is likely to have a limited direct impact on that country.

Regional analyses carried out by research partners of the Regional Strategic Analysis and Knowledge Support System (ReSAKSS) network on domestic food prices indicate that high international prices were slow to transmit to both Eastern and Southern Africa and that many countries had not yet experienced the subsequent decrease in food prices (Macharia et al. 2009; Minde, Chilonda, and Sally 2008).

In 2008 in Eastern and Southern Africa, domestic food prices increased with some variation across countries, although the rate at which food prices increased was slower than the international rate. In this region, the countries with the smallest food price index increase were Malawi (11 percent), Zambia (13 percent), and Tanzania (13 percent). These three countries were significant food exporters during this period, but each recently introduced maize export bans, which may have shielded them from external price increases. Namibia and South Africa experienced medium increases in domestic food prices compared to their neighbors throughout the Southern African region. Although Namibia is a large food importer, it produces a large portion of its needs for grains. Therefore, compared to other Southern African countries, it experienced a moderate domestic price increase of 17 percent. Likewise, prices in South Africa increased by 16 percent, probably due to the counteracting effects of its large and stable food economy on the one hand and its depreciating currency on the other. The country in this region that experienced the largest domestic food price increase was Lesotho (20 percent), which is heavily reliant on imported food.

Local policies and events also contributed to the variable effects across African countries. For example, in Ethiopia, droughts and monetary policies contributed to food inflation, whereas civil conflict was a primary cause in Kenya. Ghana also experienced a high rate of inflation, although this was not chiefly due to food inflation. In mineral-exporting countries, inflation may have been high due to both food inflation (because of food imports) and nonfood inflation associated with rising commodity prices. In contrast to these select African countries, general inflation in much of the rest of Africa was actually quite low (Figure 4). Considering that food can make up as much as 50 percent of the Consumer Price Index (CPI) bundle in African countries, the CPI is a good clue for food price trends in Africa, especially in the absence of longer term data.

**Figure 4. Average annual Consumer Price Index (CPI) inflation, January 2005 to July 2008**



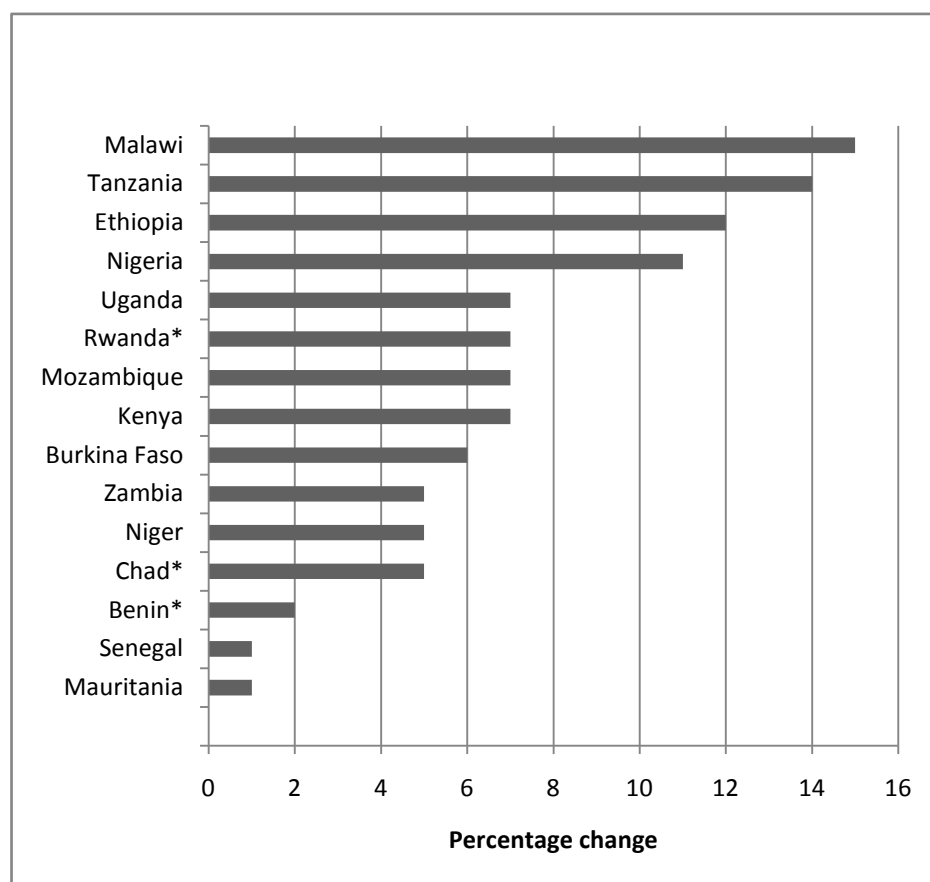
Source: IMF 2008.

Notes: Inflation is calculated until July 2008 wherever possible. \* Indicates that the regional group excludes any countries that are listed individually or in the mineral exporter category—that is, “West and Central Africa” excludes Nigeria, Ghana, and Sierra Leone, and “East Africa” excludes Kenya and Ethiopia. \*\*The five mineral exporters are Nigeria, Zambia, Botswana, Angola, and Sierra Leone (though the last is only a moderate exporter).

More commodity-specific urban food price data collected by U.S. Agency for International Development’s (USAID) Famine Early Warning System Network (FEWSNET) also suggest that the impact of rising food prices varied across Africa. Figure 5 shows the percentage change in nominal urban retail prices of maize.<sup>1</sup> In about one-quarter of the countries for which data are available, prices rose by 10 to 15 percent, which is actually a sizeable rise, given that many Africans heavily consume maize. In another quarter of the countries, sample maize prices rose by around 7 percent, and in another quarter, they rose by about 5 percent; in the remaining countries, prices were steady. In a few countries, maize prices rose at even higher rates. For example, maize prices rose by 32 percent in Zambia, 65 percent in Mozambique, and more than 100 percent in Malawi and Tanzania.

<sup>1</sup> Because the prices are not deflated by a nonfood Consumer Price Index (CPI), it could be argued that these figures overstate the real price rise, but the exaggeration is probably only slight.

**Figure 5. Percentage change in nominal retail maize prices in urban centers, 2008**



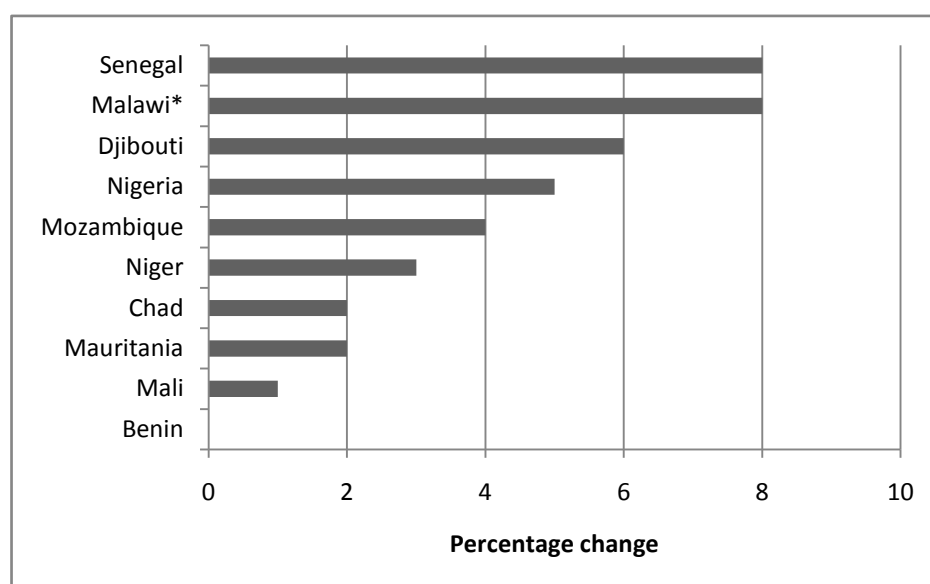
Source: Famine Early Warning System Network (FEWSNET) 2009.

Note: \* The data for these countries apply from mid-2007 to mid-2008, rather than for the calendar year 2008.

Figure 6 looks at these same statistics for rice, which is imported more heavily than maize. Rice prices in the countries shown in Figure 6 generally rose by less than the increase in maize prices, despite experiencing larger international price increases. One reason for this is that the international price increases for rice were relatively short lived compared to those for maize. Indeed, international rice prices peaked in the middle of 2008 but declined rapidly thereafter, so the worst few months of 2008 may not actually be reflected in Figure 6. In addition, rice has domestic substitutes, including some domestically produced rice varieties and other staple foods, which may have dampened the international price transmission to domestic markets. Another reason is that some countries reduced or removed tariffs on rice imports. Nigeria, for example, removed a 100 percent tax on rice imports. Hence, through government policies and market forces, some countries were able to buffer the international price rise.



**Figure 6. Percentage change in nominal rice prices in urban centers, 2008**



Source: FEWSNET 2009.

Note: \* The data for these countries apply from mid-2007 to mid-2008, rather than the calendar year 2008.

### *Policy Options*

A range of short-, medium-, and long-term policy options are available to governments. However, finding the right mix of measures that do not counteract one another is difficult. For example, restricting food exports to conserve domestic supplies may protect the poor by capping local food prices, but it denies local farmers access to profitable external outlets for their crops. Therefore, the challenge for governments rests in identifying and implementing policies that protect the poor from price increases while also stimulating food production in the long run.

Most experts now recommend a two-level approach to this challenge. This approach focuses on (1) short-term coping strategies that protect the poor without distorting the domestic food economy and (2) long-term “resilience” measures that allow farmers to take advantage of production incentives, while also stabilizing the economy to prevent vulnerability to future crises and price variability.<sup>2</sup> Donors can help “African countries meet the higher foreign exchange and budgetary resource requirements, while avoiding distortionary interventions in the sector” (Badiane 2008, 4).

Without continued and increased investments to the agricultural sector, the food crisis could return with a vengeance. According to a report by the International Food Policy Research Institute (IFPRI), if agricultural investments taper off due to shrinking available credit, food production will contract even further, which could lead to future food price spikes (von Braun 2008a). However, this time, because poor people are making lower wages (due to the decreased production that accompanies a recession), the effects will be more severe. If, however, agricultural investments are maintained during the recession, IFPRI researchers found that developing countries could avoid many of the negative effects of slower growth.

In addition to long-term funding for agriculture, the African continent needs expanded intraregional trade in food commodities. Countries in Sub-Saharan Africa (SSA) will likely differ in their exposure to international food prices. Recent trends indicate that some countries will not register large direct impacts of food price rises, either because much of their population relies on nontradable staples (such as cassava in Mozambique) or because they are not fully integrated into global food markets. For

<sup>2</sup> See, for instance, Badiane 2008; Minde, Chilonda, and Sally 2008; von Braun 2008a; and von Braun et al. 2008.

these countries which have a degree of “natural protection” from conditions in global markets, regional markets will be increasingly important (Minde, Chilonda, and Sally 2008).

## Responses of Donors and Governments

As a response to the crisis, international donors pledged more than US\$12 billion in development aid at the June 2008 FAO summit (von Braun 2008a). However, with the sudden onslaught of the financial crisis, only US\$1 billion has been doled out (Montero 2008). Moreover, donors merely directed more funds to food aid relief and away from longer-term development goals (Badiane 2008).

### Box 1. Examples of government responses to high food prices<sup>3</sup>

In **Eastern Africa**, **Ethiopia** banned exports of the main cereals and grain stockpiling and suspended the World Food Programme’s (WFP) local purchases for emergency interventions. The government also imposed a temporary 10 percent surtax on luxury imports to fund food subsidy interventions, including the distribution of subsidized wheat to low-income urban households. **Congo** reduced the rate of the value-added tax (VAT) on basic imported foodstuffs from 18 to 5 percent. **Kenya** allowed up to 270,000 tons of duty-free maize imports from South Africa and removed sales taxes on rice and bread. The government also reduced the import tax on wheat from 35 to 10 percent.

In **Southern Africa**, **South Africa** has planned adjustments to the amounts paid in social grants to the poor so as to mitigate the impact of rising food prices. In **Zambia**, following seasonal floods, and despite a large exportable surplus of maize in the 2007/08 marketing year (May/April), the government reinstated the export ban applicable for any new contracts.

**Zimbabwe** continues to control imports of maize, wheat, and sorghum, which are sold at subsidized prices. Although an early import contract of 400,000 tons of maize from Malawi partially mitigated the increase in import prices this year, domestic consumer price inflation, measured at more than 26,000 percent in November 2007, drastically eroded the Zimbabwean consumers’ purchasing power.

In **Western Africa**, **Benin** and **Senegal** enacted price controls and waived tariffs. **Ghana** eliminated all import duties on rice, wheat, yellow corn, and vegetable oil and provided free tractors and fertilizer subsidies for farmers. **Liberia** completely banned all food exports in May 2008. **Nigeria** suspended tariffs on rice imports for six months in May 2008.

In Africa, as in other regions of the world, the initial response to the food price increases has generally been a protective one (Box 1). The focus has been on ensuring the availability of local food, keeping a lid on consumer prices, and supporting the most vulnerable members of the population. These tactics have largely been considered coping mechanisms, however, rather than efforts to encourage an adequate supply response. The two most frequently used policies in Africa in response to high food prices have been reduced taxes on food grains (used in more than 40 percent of African countries) and price controls or consumer subsidies (used in more than 30 percent of African countries). Other measures include export bans and stock drawdowns. All of these measures are short term and fairly unsustainable. Moreover, they could exacerbate the crisis because they may discourage a production response, while also making the international food market smaller and more volatile (Ngongi 2008; FAO 2008b).

<sup>3</sup> Food and Agriculture Organization of the United Nations (FAO) 2008; World Bank 2008; Benson et al. 2008; FAO 2008b.

### *Gender Aspects of the Food Crisis*

Men and women are likely to be affected by the food crisis differently. According to IFPRI research, women are less able to cope with and overcome crises of all kinds, because they have less access to and control over resources and assets (Quisumbing, Meinzen-Dick, and Bassett 2008). Rising prices can then have repercussions for the entire household, as women face greater time constraints because they have to travel farther to find cheaper, but more labor-intensive, foods to prepare. Moreover, women are often the “shock absorbers” for threats to household food security, sacrificing their own nutrition for the benefit of others in the home. At the same time, gender conflicts and negotiations within the household may limit the household’s ability to increase production, thereby hindering its ability to benefit from higher prices. All of these factors must be considered in assessing the impact of the food crisis.

### **Conclusions**

African agriculture has indeed made progress, despite facing immense challenges in dealing with global uncertainties following the food price of 2008 and the financial crisis of 2009. For example, African countries have made considerable progress in designing, implementing, and monitoring agricultural and rural development strategies as they strive to align with the CAADP agenda. Since 2008, over a dozen African countries signed their CAADP country compacts, with several additional countries scheduled to sign by mid 2010.

The food price hikes in Africa in 2008 were fairly similar to those experienced in the rest of the world, with the exception of “sticky” domestic prices in some countries. This means that some prices did not increase at the same rate as international prices and that some have yet to come back down, as international prices generally have. Nevertheless, the greatest trend has been price volatility across and within African countries, which is harmful due to the uncertainty it creates in agricultural markets. This volatility has also resulted in a mismatch between input and output prices for farmers who invested in their production during the price upswing (when inputs were expensive) and who are now harvesting and trying to sell their goods during a price downswing.

The food price crisis has generally had negative welfare effects on the African population, because few farmers have had the opportunity to benefit from the higher prices through increased production. The financial crisis and international economic slowdown have exacerbated the food crisis situation, rather than remedied it. These two events have shrunk the amount of capital available for investment in agriculture, shrunk employment and wages, and decreased the amount of credit available for farmers. Under these current trends, it is possible that a larger, more harmful food crisis could be triggered in the near future.

Given these challenges, it is only that much more imperative that the CAADP implementation process move forward to better prepare countries against such future shocks. There is a need for countries and donors alike to strengthen the resilience of agriculture and rural economies in Africa. This task will require higher, consistent, and effective resource allocation to the sector in order to increase agricultural growth, food security, and stability. The next section reviews trends in expenditures to African agriculture by governments and donors.

### 3. INVESTMENT AND RESOURCE FLOWS TO AFRICAN AGRICULTURE

From the 1990s to the early 2000s, both donor and government allocations to agriculture were low. In some countries, this fact remains true. However, there is now renewed interest in allocating more resources to the sector, particularly to meet the 10 percent budgetary allocation target of CAADP. This section discusses recent trends in agricultural funding in Africa and the efficiency of resource use.

#### Tracking Government Expenditures on Agriculture in Africa

The latest evidence shows that since 1980, agricultural spending as a share of total spending in Africa has ranged from 4 to 6 percent on aggregate (Johnson et al. 2008). Thus, African countries as a whole did not meet the CAADP 10 percent budgetary allocation target by 2008. Despite a 75 percent increase in the share of agricultural spending from 2000 to 2005, the target remains unmet because of the low initial base prior to 2000. Only eight countries—Burkina Faso, Ethiopia, Mali, Malawi, Ghana, Niger, Senegal, and Zimbabwe—reached or surpassed 10 percent (see Table 1 and Figure 7). Nine of the reporting countries reached expenditure shares between 5 and 10 percent, whereas 28 countries devoted less than 5 percent of their total budgets to the sector.

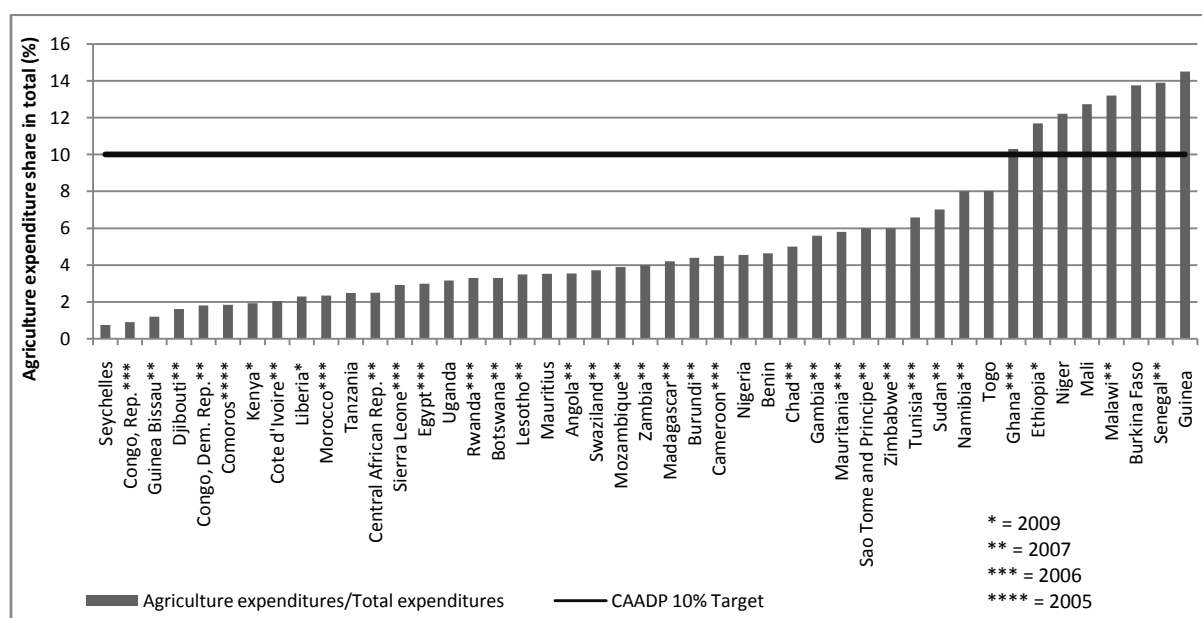
**Table 1. Level of government agriculture expenditure as a share of total government expenditure, 2008 (unless otherwise noted)**

At least 10 percent	5 percent to less than 10 percent	Less than 5 percent
Burkina Faso	Chad <sup>2</sup>	Angola <sup>2</sup>
Ethiopia <sup>1</sup>	Gambia <sup>2</sup>	Benin
Ghana <sup>3</sup>	Mauritania <sup>3</sup>	Botswana <sup>2</sup>
Guinea	Namibia <sup>2</sup>	Burundi <sup>2</sup>
Malawi <sup>2</sup>	Sao Tome and Principe <sup>2</sup>	Cameroon <sup>3</sup>
Mali	Sudan <sup>2</sup>	Central African Republic <sup>2</sup>
Niger	Togo	Comoros <sup>4</sup>
Senegal <sup>2</sup>	Tunisia <sup>3</sup>	Congo, Dem. Republic <sup>2</sup>
	Zimbabwe <sup>2</sup>	Congo, Republic <sup>3</sup>
		Cote d'Ivoire <sup>2</sup>
		Djibouti <sup>2</sup>
		Egypt <sup>3</sup>
		Guinea Bissau <sup>2</sup>
		Kenya <sup>1</sup>
		Lesotho <sup>2</sup>
		Liberia <sup>1</sup>
		Madagascar <sup>2</sup>
		Mauritius
		Morocco <sup>3</sup>
		Mozambique <sup>2</sup>
		Nigeria
		Rwanda <sup>3</sup>
		Seychelles
		Sierra Leone <sup>3</sup>
		Swaziland <sup>2</sup>
		Tanzania
		Uganda
		Zambia <sup>2</sup>

Sources: Based on ReSAKSS data collected from various national government sources and IMF 2009.

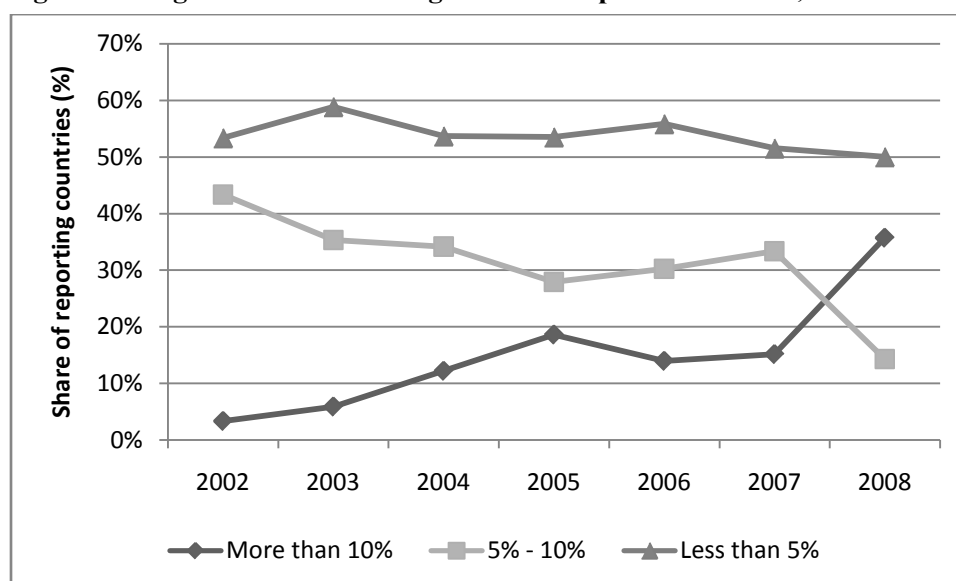
Notes: 1. Estimate for 2009; 2. 2007; 3. 2006; 4. 2005; 5. 2004

**Figure 7. Agriculture expenditures and the CAADP 10% target, 2008 (unless otherwise noted)**



Since the 2003 Maputo Declaration, many African governments have increased their budgetary allocations to the agriculture sector. In 2003, only 5.9 percent of African countries were spending at least 10 percent of their total budget allocations on agriculture. This figure increased to 15.2 percent in 2007 and 35.7 percent in 2008 (Figure 8). Many of the countries that have increased their spending allocations since 2003 have progressed from the range of 5 to 10 percent spending to greater than 10 percent spending. In addition, a number of countries have increased their allocations from less than 5 percent to between 5 and 10 percent, including The Gambia, Sao Tome and Principe and Togo. This upward trend may indicate that some countries are responding to the Maputo Declaration's target. Nevertheless, the majority of African countries have generally stayed in the same grouping of budgetary allocation, especially those countries with initially low spending rates.

**Figure 8. Progress toward 10 % agricultural expenditure share, 2002–2008**



Sources: Based on ReSAKSS data collected from various national government sources and IMF 2009.

An alternative measure for the priority given to agriculture, other than agricultural expenditures as a share of total expenditures, is the ratio of agricultural expenditures to agricultural GDP. This measure of government spending on agriculture explicitly weighs the size of the sector in the overall economy when comparing across countries. For example, 10 percent of total spending may translate into a 5 percent share of agricultural GDP for countries in which the sector is large and, therefore, important to the national economy. In other cases, 10 percent of total spending may translate into a 15 percent share of agricultural GDP for countries in which the agricultural sector is less important. Botswana, for example, has barely spent 5 percent of total expenditures on the sector since 1980, yet it represents more than 60 percent as a share of agricultural GDP (see Table 2 and Figure 9).

**Table 2. Level of agricultural investment as a share of agricultural GDP, 2006 (unless otherwise noted)**

At least 10%	5% to less than 10%	Less than 5%
Botswana <sup>1</sup>	Burkina Faso	Benin <sup>2</sup>
Zambia	Egypt	Cameroon
Zimbabwe	Ethiopia	Cote d'Ivoire <sup>1</sup>
	Mali	Ghana
	Niger	Kenya
		Malawi
		Nigeria <sup>1</sup>
		Rwanda
		Togo <sup>1</sup>
		Uganda

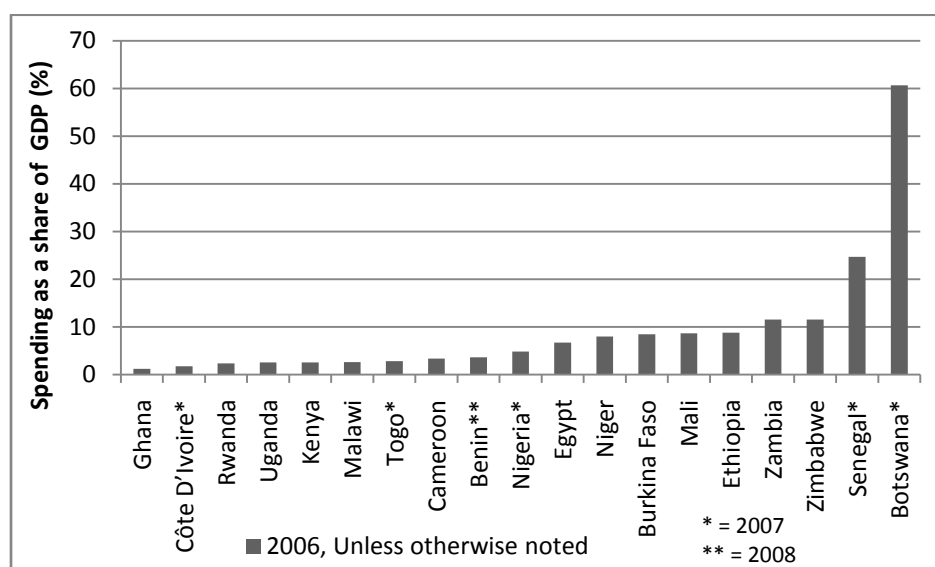
Sources: International Monetary Fund (IMF) 2008, except for Malawi figures from Benin, Thurlow, Diao, McCool and Simtowe 2008 and Zambia figures from Benin, Thurlow, Diao, Kalinda and Kalinda 2008.

Notes: 1. 2007; 2. 2008. The ratio of agricultural expenditures to agricultural GDP is low in Africa when compared with Asia. On aggregate, Africa spent between 5 and 7 percent as a share of agricultural GDP, whereas Asia spent between 8 and 10 percent. With the exception of Botswana, Zambia and Zimbabwe, African countries have spent less than 10 percent of their agricultural GDPs on agriculture in recent decades. Yet, country-level data show that the range can be considerable. For example, Botswana had the highest percentage in 2005 at 60 percent, while Côte d'Ivoire and Ghana spent less than 2 percent in the same year.

The inability of African countries to substantially raise the level of their agricultural investments may have serious implications for poverty reduction and food security. Recent estimates indicate that in order to achieve MDG1, the continent will need to boost agricultural spending by US\$13.6 billion 2007 dollars annually from 2008 to 2015, with a cumulative total of US\$95.7 billion (Fan, Johnson, Saurkar, and Makombe 2008).<sup>4</sup> This suggests that the continent will need to increase its agricultural spending by at least 20 percent per year.

<sup>4</sup> This total excludes Zimbabwe as an outlier and is based on a sample of 30 Sub-Saharan African countries.

**Figure 9. Agricultural expenditure as a share of agricultural GDP, 2006 (unless otherwise noted)**



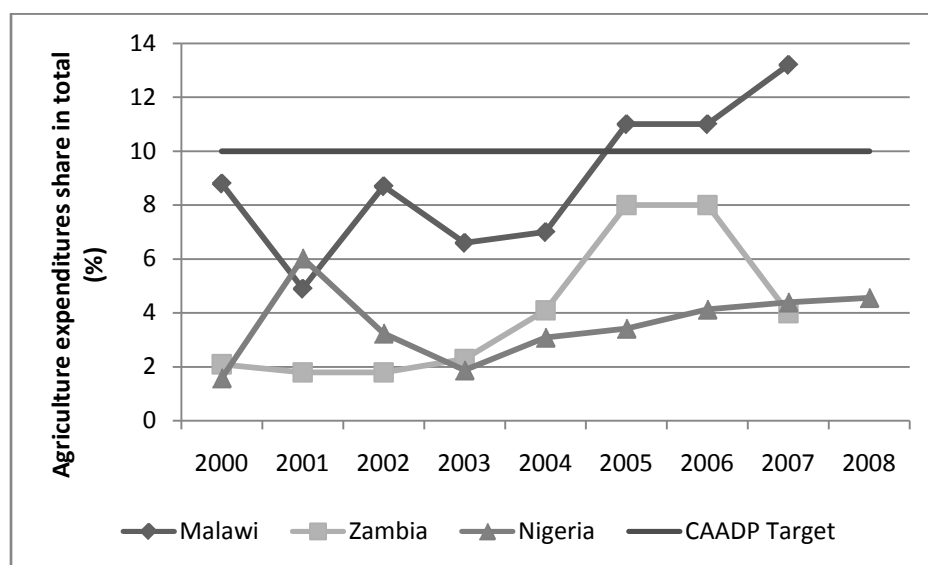
Sources: International Monetary Fund (IMF) 2008, except for Malawi figures from Benin, Thurlow, Dia, McCool and Simtowe 2008 and Zambia figures from Benin, Thurlow, Dia, Kalinda and Kalinda 2008.

## Resource Efficiency

As governments increase their budgetary allocations to agriculture, it is important to further examine the quality of this spending. How are governments allocating these funds? Are these funds coming from government sources or from donors? Is spending diverging from allocations? To better understand the causes of poor agricultural investment ratios in Africa, three country case studies are drawn from here: Malawi, Zambia, and Nigeria (Govere et al. 2009; Mogues et al. 2008; and Njiwa et al. 2008).

Agricultural spending has been increasing in all three countries since 2000, with Malawi even surpassing the CAADP's 10 percent target in recent years (Figure 10).

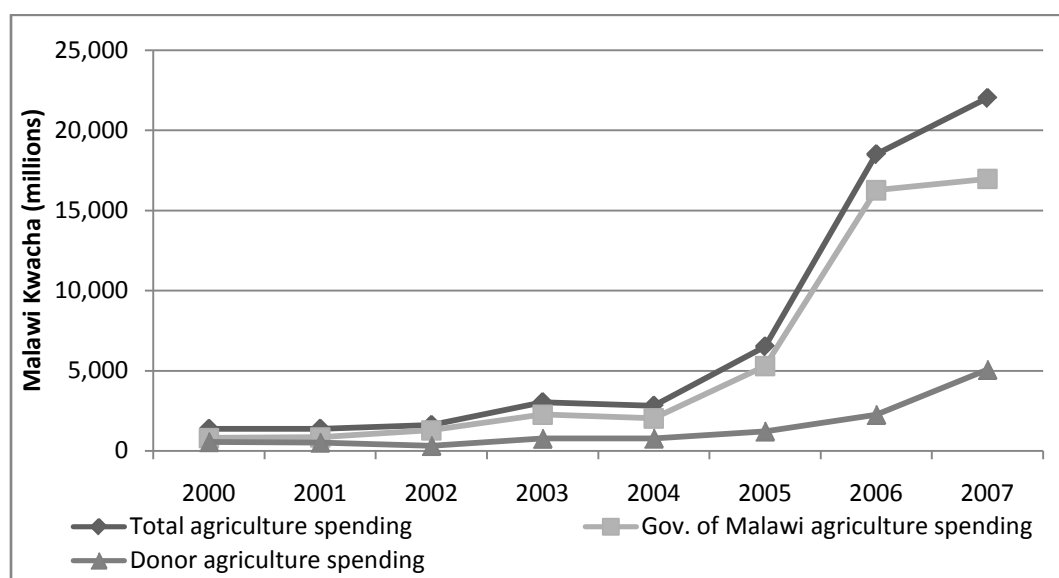
**Figure 10. Agriculture expenditure share of total expenditures in Malawi, Zambia, and Nigeria, 2000–2008**



Sources: ReSAKSS 2010, IMF 2009 and Benin et al. 2008.

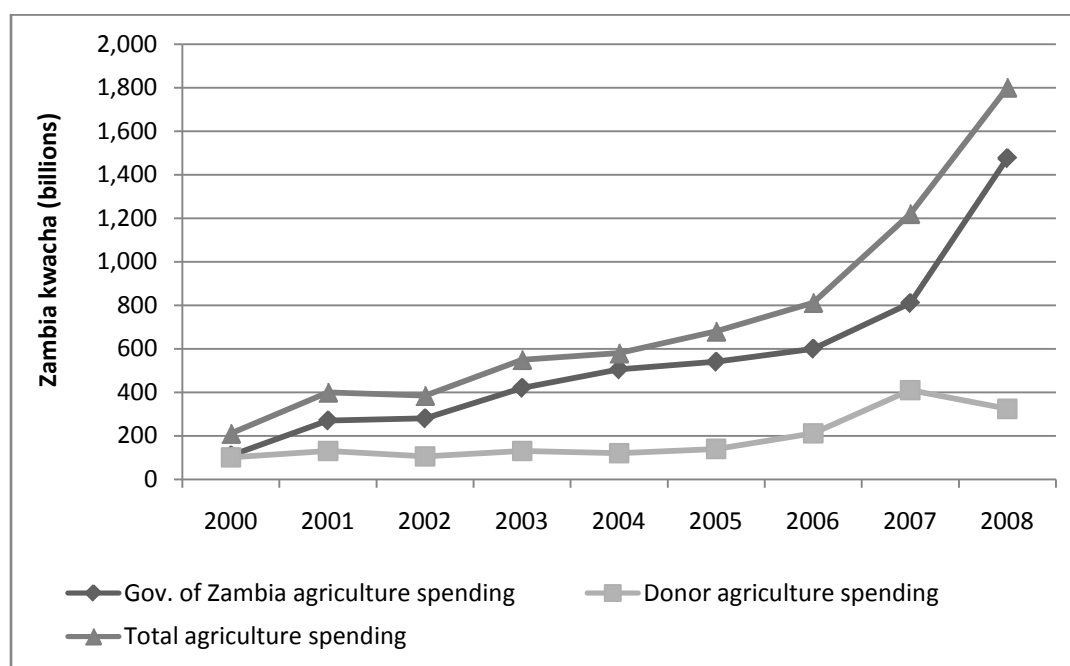
In Malawi and Zambia, the majority of this increase in agriculture spending has come from government sources as opposed to donors (Figure 11 and Figure 12). In Zambia, fiscal dependence on development partners for agricultural spending declined, from 48 percent in 2000 to 18 percent in 2008. Likewise, in Malawi, the donor share of total government spending on agriculture declined from 41 percent in 2000 to 23 percent in 2007, with a low of 12 percent in 2006. Although this is a positive development for sustainability and independence from aid, there could be a need for donors to increase their support for agriculture.

**Figure 11. Source of agriculture spending in Malawi, 2000–2007**



Source: Njiwa et al. 2008.

**Figure 12. Source of agriculture spending in Zambia, 2000–2008**



Source: Govereh et al. 2009.



The overwhelming trend for these four countries (Ghana, Malawi, Nigeria, and Zambia) is that they are all investing primarily in one particular program. For instance, Ghana has focused on one particular crop (cocoa), whereas Nigeria, Malawi, and Zambia have invested most heavily in input support (Table 3). Yet input support is a short-run distributive program; although it will have short-term productivity gains, it will not have the longer term results that agricultural research or irrigation investments would have.<sup>5</sup> A single subsector-dominant investment strategy is unlikely to yield desirable outcomes on its own. This pattern raises concerns about the sustainability and balance of agriculture spending (Benin, Thurlow, Diao, Kalinda and Kalinda 2008; Benin, Thurlow, Diao, McCool and Simtowe 2008).

**Table 3. Composition of agriculture spending**

	<b>Ghana</b> <b>(2000–2005)</b>	<b>Malawi</b> <b>(2000–2007)</b>	<b>Nigeria</b> <b>(2001–2005)</b>	<b>Zambia</b> <b>(2000–2008)</b>
Price support				20.2
Inputs			<b>43.5</b>	<b>39.7</b>
Food security		<b>50.5</b>	22.0	
Livestock			2.7	3.3
Fishery		3.2		1.1
Crops, livestock, and fishery (aggregate)	23.7			
Forestry	3.5	7.3		4.1
Cocoa	<b>62.2</b>			
Research and extension	10.6	13.0		21.7

Sources: Benin, Thurlow, Diao, Kalinda and Kalinda 2008; Benin, Thurlow, Diao, McCool and Simtowe 2008; Mogues et al. 2008; Njiwa et al. 2008; Govereh et al. 2009.

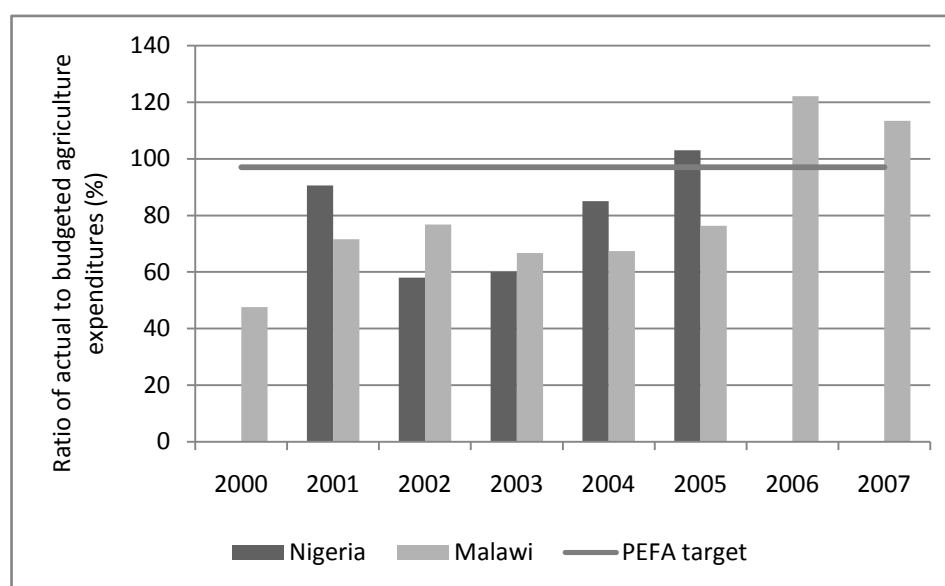
The ratio of actual spending to budgeted spending, or the investment gap ratio, is a measure of how efficiently resources are being used. The Public Expenditure and Financial Accountability (PEFA) best-practice standard is a maximum of a 3 percent discrepancy between budgeted and actual expenditures, which is equal to a ratio of 97 percent (Mogues et al. 2008). If a country's ratio exceeds 97 percent, it suggests that the government is underutilizing approved funds, which could be a symptom of capacity problems. If the ratio is greater than 100 percent, it is indicative of government overspending.

Inefficient budget execution may negatively affect policy planning, design, and implementation and can make it difficult to attain goals and expected outcomes for projects and policies. One result of this inefficiency is that programs may have to change or end midstream if promised funding does not materialize. Extreme investment ratios also erode the credibility of a government's claim that approved projects will actually be financed.

Figure 13 shows the investment gap ratios of both Nigeria and Malawi for the past several years as compared with the PEFA standard ratio. From 2000 to 2004/5, both countries had poor budget execution, within a range of 48 to 85 percent. This means that up to 52 percent of budgeted resources for agriculture were not being spent. In contrast, in recent years, both countries have overspent the budgeted amount.

<sup>5</sup> See, for example, Thirtle, Lin, and Piesse 2003 and Fan, Xhang, and Rao 2004.

**Figure 13. Investment gap ratios in Nigeria and Malawi, 2000–2007**



Sources: Mogues et al. 2008; Njiwa et al. 2008; Govereh et al. 2009.

Note: The PEFA target is considered the threshold below which the investment gap ratio indicates underutilization of funds. It is set at 97 percent.

In both Nigeria and Malawi, the gap between budgeted agriculture spending and actual spending has largely been driven by deviations in capital outlays, rather than by recurrent spending. An exception is Malawi in recent years, which has witnessed a more stable development budget but which has been greatly overspending on the recurrent. Malawi's recent overspending is largely due to overruns in the costs of the subsidy programs. Recurrent spending consists more of salaries and staff expenses, which means that once they are set, they do not usually change yearly. Projects, on the other hand, can be negotiated and can change frequently, making it hard to budget the line items from year to year (which leads to budget under execution). Another reason for poor budget execution is that budgets are formed based on the demands of constituencies, whereas fiscally restrained finance ministries often pare down implementation.

## Development Assistance to Agriculture

From 1980 to 2006, development assistance to all developing countries has grown at an annual average rate of 5 percent. Total aid in these developing countries grew from US\$7 billion in 1980 to US\$27 billion in 2006.

In contrast to the increase in total aid to developing countries since 1980, agricultural aid to these countries fell dramatically in the 1990s. According to the FAO (2008b), from 1990 to 1999, total lending to agriculture worldwide from external sources fell by 50 percent. In Africa as a whole, donor spending for agriculture as a share of total donor spending saw a consistent decline, from an average of 15 percent between 1980 and 1995 to 12 percent between 2000 and 2002. In 2006, the ratio had declined to about 4 percent. Total overseas development assistance (ODA) for agriculture in Sub-Saharan Africa has hovered at US\$1 billion a year since the 1990s. In comparison, the share of ODA spent on aid for emergencies has doubled and, in actual dollars, has more than quadrupled during the same period.

All of the SSA countries in Table 4 spent less than 10 percent of their aid budgets on agriculture. Botswana and Nigeria spent less than 1 percent of all aid received on agriculture. However, Burkina Faso spent 8 percent of its total aid on agriculture. The remaining countries spent between 3 and 6 percent of

their aid budgets on agriculture. Thus, agriculture has not been prominent in the agenda of many donors, perhaps not because of any conscious decisions but because of pressure to broaden their aid agendas.

In addition, ODA for agriculture in some countries (such as Mozambique and Tanzania) greatly overshadows the amount spent by the government itself. These contributions risk “crowding out” domestic agriculture investments by reducing the government’s political incentives to increase their shares.

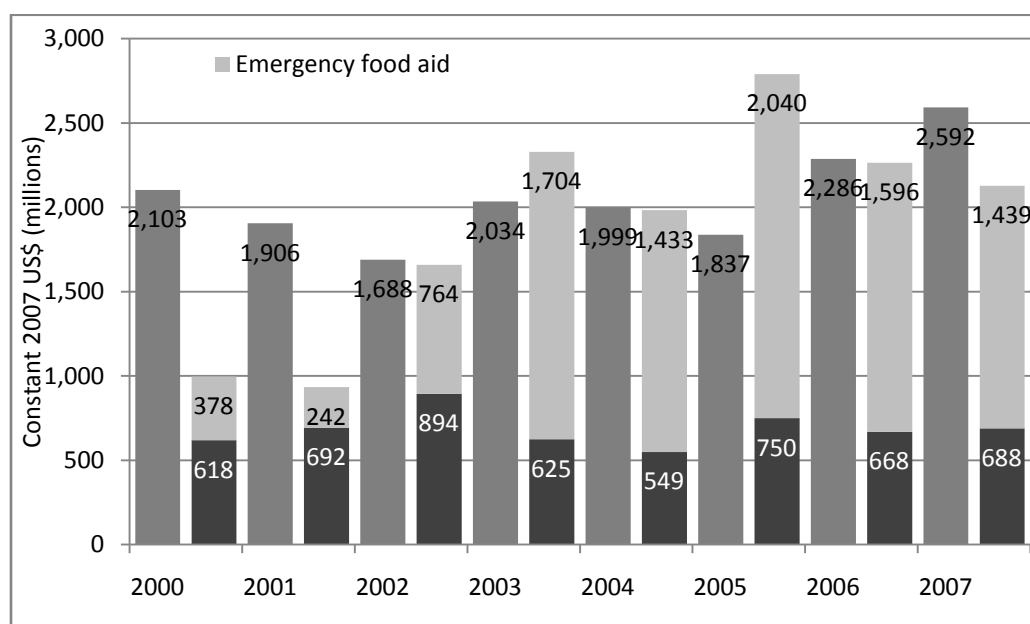
Africa is now facing the same type of long-term food deficit problem that India faced in the early 1960s. As a result of inadequate investment in the African agriculture sector, the continent’s overall agricultural productivity has fallen since the mid-1980s, leaving it vulnerable to frequent food crises and dependent on emergency food aid and food imports. In response to these food crises, governments and donors have devoted more resources to emergency aid than to long-term agricultural development, which further undermines the ability of countries to generate economic and agricultural growth. Although investment in agriculture has increased in recent years, a large and increasing share is still devoted to short-term food aid interventions (Figure 14 and Figure 15). Consequently, poverty and hunger persist and threaten the likelihood of some of the countries being able to reach the Millennium Development Goals (MDGs).

**Table 4. Agricultural aid to Africa, 2002–2008**

	Aid to agriculture (2007 constant dollars, million)							Agricultural aid as a percentage of total aid						
	2002	2003	2004	2005	2006	2007	2008	2002	2003	2004	2005	2006	2007	2008
Botswana	0.3	0.4	0.5	0.6	0.6	8.0	—	0.5	0.6	1.0	0.8	0.8	9.0	—
Burkina Faso	22.0	35.4	33.7	35.6	44.5	58.5	7.7	3.2	4.5	4.6	4.4	5.2	2.6	0.8
Cameroon	13.1	13.5	12.6	13.7	23.1	52.7	—	1.4	1.1	0.9	1.2	3.1	1.5	—
Côte d'Ivoire	13.3	5.0	3.3	2.4	15.3	5.3	—	2.5	0.2	0.6	0.6	5.8	1.4	—
Egypt	25.1	31.1	23.0	56.2	71.5	45.4	—	1.1	1.5	1.3	2.6	4.1	2.9	—
Ethiopia	29.4	41.1	21.0	31.3	38.1	46.0	0.2	1.7	2.1	1.0	1.4	1.7	0.7	0.0
Ghana	14.4	17.9	25.5	41.1	38.7	51.1	0.0	1.2	1.5	1.9	1.6	2.1	0.8	0.0
Kenya	21.8	22.3	23.6	19.1	43.9	52.2	7.1	2.4	2.9	2.7	2.1	4.4	4.5	0.5
Malawi	10.1	21.0	14.9	38.1	26.9	47.2	—	1.4	3.5	2.1	5.7	3.6	1.5	—
Mali	31.2	23.0	41.9	40.5	31.6	63.3	6.9	4.6	2.8	5.2	4.7	3.5	2.2	0.6
Morocco	12.7	12.4	13.0	16.2	21.6	26.6	—	1.1	1.2	1.3	1.4	1.7	1.8	—
Nigeria	3.5	5.5	3.5	7.9	6.7	7.4	—	1.1	1.2	0.8	1.1	0.1	0.1	—
Togo	2.3	3.3	2.3	2.2	1.2	1.3	0.3	1.7	3.1	2.5	2.2	1.1	1.2	0.2
Tunisia	16.0	16.6	14.2	13.0	15.0	11.4	—	1.8	2.5	2.3	2.2	2.5	1.6	—
Uganda	11.7	18.7	33.4	38.1	56.6	57.0	7.2	0.8	1.5	2.4	2.4	3.9	1.1	0.4
Zambia	21.2	16.3	13.7	29.9	37.0	39.8	3.1	1.7	1.1	1.0	1.8	1.7	0.8	0.3

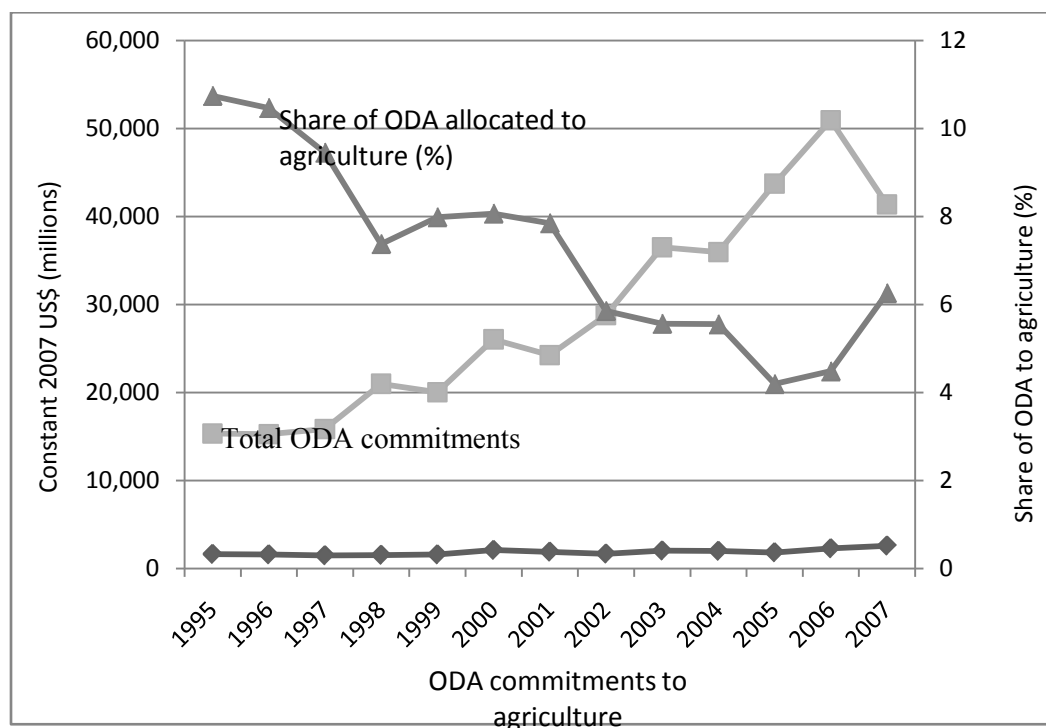
Source: Organization for Economic Cooperation and Development (OECD) 2009; statistical portal accessed on November 5, 2009. Amounts based on gross disbursements.

**Figure 14. ODA commitments to African agriculture by type, 2000–2007**



Source: Organization for Economic Cooperation and Development (OECD) 2009

**Figure 15. ODA commitments to Sub-Saharan Africa: Level and share to agriculture, 1995–2007**



Source: OECD 2009. Based on ODA commitments in 2007.

In response to the 2003 Maputo Declaration, many African governments and their development partners are increasing the *quantity* of agricultural spending. Donor spending has increased slightly, but not at the same rate as government spending. Although this is good for national independence, it calls for development partners to step up to their commitments. Without question, African governments and donors should increase their investments in the prime movers (human capital, technology, and institutional innovations) to increase farm production and accelerate agricultural growth.

Simply increasing agricultural spending is only part of the picture, however. Rural poverty reduction cannot be achieved without agricultural growth, and neither is it likely to happen simply by investing in the agricultural sector alone. Setting the right priorities for public spending is equally important. Investment strategies must be unique to each country's specific needs. Moreover, the *quality* of agricultural spending is also important. As this section has shown, although the investment gap ratio has been declining, more attention is still needed to improve program effectiveness. Based on a number of country case studies, government expenditures have focused largely on inputs (fertilizer and seeds) at the cost of investments that will have longer term impacts on productivity, such as agriculture research and development, irrigation, and rural infrastructure. Even more important, many countries need to improve the execution of their budgets in order to avoid any negative impacts on policy planning, design, and implementation, as well as to enable attainment of the development goals enshrined in the CAADP country compacts.

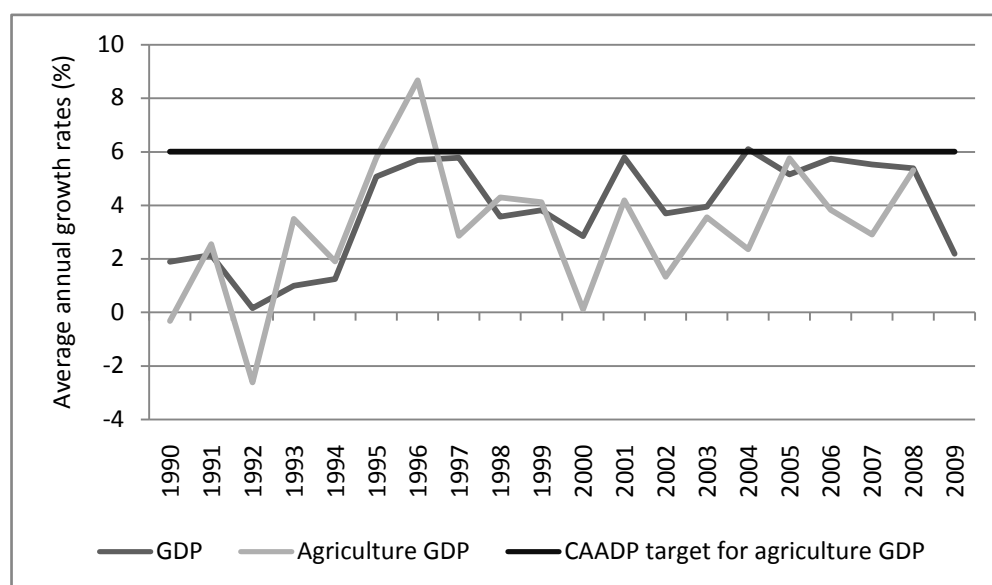
## 4. EVALUATION OF AFRICAN AGRICULTURAL SECTOR PERFORMANCE

With increased commitments and resources flowing to the agricultural sector, it is expected that performance in the sector will improve. This section will show that, in fact, agriculture's performance on the African continent has been positive and improving in recent years, though direct attribution to increased investment as the main cause is still tenuous. Yet it is still difficult to estimate the full impact of the recent food price crisis and the onslaught of the financial crisis on agricultural performance. Therefore, more resources and detailed attention to the sector are needed to overcome the potential setbacks and to achieve the CAADP targets and MDGs.

### Economic and Agricultural Performance

Over the past two decades, annual growth in both agricultural GDP and overall GDP increased substantially at the continental level in Africa (Figure 16). Although agricultural performance varies within and across African countries, recent trends indicate an increase in agricultural GDP growth at the continental and regional levels. Sub-Saharan Africa's agriculture GDP growth rate increased from an annual average of 3.0 percent in the 1990s and 2000s to 5.3 percent in 2008 (Table 5). A similar trend can be observed at the regional level. All regions saw an increase in average agricultural growth rates from approximately 3.0 percent in the 1990s to 2008, although Southern Africa has seen the most dramatic increase with a current agriculture GDP growth rate of 7.1 percent. Despite these trends, however, it is still not possible to know what the impact on agricultural growth rates for 2009 were from the food crisis of late 2007 and early 2008 and the subsequent global recession.

**Figure 16. GDP and agriculture GDP growth rates, 1990–2009**



Source: World Bank 2009.

Note: 2009 GDP estimates are from International Monetary Fund (IMF) 2009.

**Table 5. Agricultural performance, 1990–2007**

		<b>Annual Agricultural GDP Growth (%)</b>				
		<b>1990-1999</b>	<b>2000-2005</b>	<b>2006</b>	<b>2007</b>	<b>2008</b>
East Africa	Burundi	-0.4	-2.5	10.9	2.5	3.4
	Comoros	2.5	4.6	-10.3	3.0	4.5
	Congo, Dem. Rep.	2.1	-1.7	2.5	3.0	3.0
	Eritrea	10.1	5.4	8.8	1.3	-2.0
	Ethiopia	2.8	5.1	10.9	9.4	7.7
	Kenya	2.1	3.0	4.4	2.3	3.0
	Madagascar	1.9	1.8	2.1	2.2	2.8
	Rwanda	3.3	5.1	11.0	-3.0	11.1
	Sudan	4.8	1.8	4.4	3.1	4.0
	Tanzania	3.5	4.8	3.8	4.0	10.6
	Uganda	3.7	2.9	0.9	-0.3	9.1
Southern Africa	Angola	-1.3	13.8	9.8	21.6	27.3
	Botswana	-0.7	-1.1	-0.4	1.8	2.0
	Lesotho	1.5	-4.7	14.9	-8.6	-0.6
	Malawi	9.7	-1.5	11.9	5.9	5.2
	Mozambique	4.6	4.3	10.9	6.6	7.0
	Namibia	4.8	3.7	-0.7	-1.4	41.0
	South Africa	0.8	2.1	-7.9	0.9	1.0
	Swaziland	0.5	1.2	-2.2	2.7	2.8
	Zambia	5.1	1.0	2.2	7.2	3.3
	Zimbabwe	4.9	-6.2	-2.0	-6.3	-13.5
West Africa	Benin	5.3	4.9	5.6	4.2	3.8
	Burkina Faso	6.0	6.0	2.7	-4.3	4.6
	Cameroon	4.3	3.8	3.0	3.9	4.2
	Cape Verde	1.2	0.9	3.7	5.2	4.2
	Central African Republic	3.1	1.5	3.1	3.3	2.6
	Chad	5.6	3.3	3.2	0.1	0.1
	Congo, Rep.	0.3	6.1	8.2	-1.7	5.0
	Cote d'Ivoire	3.0	2.7	1.3	1.8	3.1
	Equatorial Guinea	6.1	2.1	3.7	10.0	-1.3
	Gabon	1.7	1.6	2.1	5.3	4.8
	Gambia, The	3.3	4.7	1.0	2.0	4.6
	Ghana	2.9	3.3	1.2	0.2	5.4
	Guinea	4.5	3.6	4.2	5.0	3.9
	Guinea-Bissau	3.9	3.9	5.5	7.0	3.2
	Mali	2.9	3.0	5.7	2.4	10.0
	Mauritania	0.8	-2.8	11.7	1.9	3.8

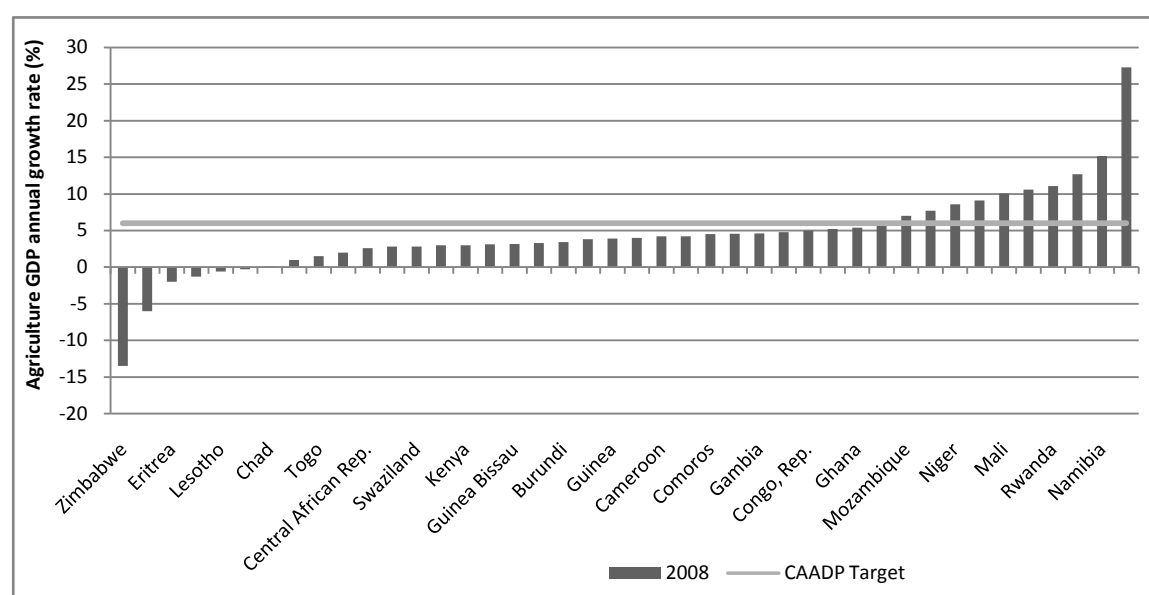


**Table 5. Continued**

	Annual Agricultural GDP Growth (%)				
	1990-1999	2000-2005	2006	2007	2008
Niger	3.3	3.2	8.1	4.0	8.6
Nigeria	3.6	13.7	7.4	7.4	-0.3
Senegal	1.8	2.5	-7.5	-5.3	12.7
Sierra Leone	-3.4	8.3	4.3	5.7	5.9
Togo	3.8	1.6	-3.5	5.8	1.5
East Africa	3.4	2.3	4.4	3.6	4.8
Southern Africa	2.9	1.3	3.5	3.0	7.1
West Africa	3.0	3.7	3.6	3.0	4.3
SSA	3.1	2.9	3.8	2.9	5.3

Sources: ReSAKSS calculations based on World Bank *World Development Indicators* (World Bank 2009).

These regional and subcontinental figures mask the diverse agricultural performance that exists across countries in Africa. Figure 17 shows that in 2008, ten countries met the CAADP's 6 percent agricultural growth target: Angola, Ethiopia, Mali, Mozambique, Namibia, Niger, Rwanda, Senegal, Tanzania, and Uganda. Nineteen other countries attained moderate agricultural GDP growth rates of between 3 and 6 percent. In the same year, eight countries experienced negative growth in their agriculture sectors.

**Figure 17. African agriculture growth rates and the CAADP 6% target, 2008**

Source: World Bank 2009.

From 2005 to 2008, GDP growth in Sub-Saharan Africa was generally high, at an average rate of 5.4 percent per year. With the exception of 2009, average GDP growth rates have been increasing, from 3.0 percent in the 1990s and 4.6 percent in the first half of the 2000s to more than 5.5 percent by 2007 (Table 6). With the international economic slowdown, however, growth projections are less optimistic and “low economic growth is likely to have negative second-round effects for investment and productivity, with direct ramifications for food prices and food security” (von Braun 2008b). GDP growth rates declined slightly to 5.4 percent in 2008 and are expected to decline to 2.2 percent for 2009, which would mark the first time GDP has grown that slowly since 1994.

A similar trend is echoed at the regional level. East and Central Africa and Southern Africa both witnessed increases in their average annual GDP growth rates from the 1990s to the early 2000s and again from the early 2000s to 2006 and 2007 (Table 6). West Africa also experienced an increase in regional average annual GDP growth from the 1990s to the early 2000s, but this increase did not continue into recent years. All regions are expected to see a drastic decline in GDP growth in 2009 to levels experienced in the 1990s due to the food and financial crises. Southern Africa is expected to witness the most significant decline to a GDP growth rate of 0.9 percent for 2009, down from 5.7 percent in 2008.

**Table 6. Economic performance, 1990–2009**

		Annual GDP Growth (%)					
		1990-1999	2000-2005	2006	2007	2008	2009
East Africa	Burundi	-1.4	1.7	5.1	3.6	4.5	3.2
	Comoros	1.6	2.5	1.2	0.5	1.0	1.0
	Congo, Dem. Rep.	-5.5	2.5	5.6	6.3	6.2	2.7
	Eritrea	8.1	0.0	-1.0	1.3	2.0	0.3
	Ethiopia	2.7	6.5	10.9	11.1	11.3	7.5
	Kenya	2.2	3.1	6.4	7.0	3.6	2.5
	Madagascar	1.6	3.0	5.0	6.2	6.9	-0.4
	Rwanda	2.1	6.7	7.3	7.9	11.2	5.3
	Sudan	4.4	6.4	11.3	10.2	8.3	4.0
	Tanzania	3.1	6.4	6.7	7.1	7.5	5.0
	Uganda	6.9	6.1	10.8	8.6	9.5	7.0
Southern Africa	Angola	1.0	9.3	18.6	20.3	14.8	0.2
	Botswana	6.1	5.7	3.0	4.2	-1.0	-10.3
	Lesotho	3.9	3.1	8.1	5.1	3.9	-1.0
	Malawi	4.1	1.1	8.2	8.6	9.7	5.9
	Mozambique	5.6	7.4	8.7	7.0	6.5	4.3
	Namibia	4.1	4.8	7.1	4.1	2.7	-0.7
	South Africa	1.4	3.9	5.3	5.1	3.1	-2.2
	Swaziland	3.7	3.6	2.9	3.5	2.5	0.4
	Zambia	0.4	4.6	6.2	6.2	6.0	4.5
	Zimbabwe	2.6	-5.8	-	-	-	3.7

**Table 6. Continued**

		Annual GDP Growth (%)					
		1990-1999	2000-2005	2006	2007	2008	2009
West Africa	Benin	4.5	4.2	3.8	4.6	5.1	3.8
	Burkina Faso	5.1	5.4	5.5	3.6	4.5	3.5
	Cameroon	0.4	3.8	3.2	3.5	3.9	1.6
	Cape Verde	5.2	4.5	10.8	6.9	6.0	3.5
	Central African Republic	1.3	-0.4	4.0	4.2	2.8	2.4
	Chad	2.2	12.6	0.2	0.2	-0.4	1.6
	Congo, Rep.	0.8	4.9	6.2	-1.6	5.6	7.4
	Cote d'Ivoire	2.6	-0.6	0.7	1.7	2.2	3.7
	Equatorial Guinea	20.2	26.1	1.3	21.4	11.3	-5.4
	Gabon	2.5	1.1	1.2	5.6	2.1	-1.0
	Gambia, The	3.1	4.5	6.5	6.3	5.9	3.6
	Ghana	4.3	4.8	6.4	6.1	6.2	4.5
	Guinea	4.3	3.0	2.2	1.5	8.4	0.0
	Guinea-Bissau	2.0	-0.8	3.5	0.6	2.7	1.9
	Mali	3.6	5.9	5.3	2.8	5.0	4.1
	Mauritania	2.6	3.7	11.7	1.9	-	2.3
	Niger	1.9	3.3	5.8	3.3	9.5	1.0
	Nigeria	3.1	6.1	6.2	6.4	5.3	2.9
	Senegal	2.7	4.5	2.4	4.7	2.5	1.5
	Sierra Leone	-4.2	12.3	7.3	6.8	5.1	4.0
	Togo	2.6	1.7	3.9	1.9	1.1	2.4
	East Africa	2.2	3.4	7.0	7.2	7.0	3.2
	Southern Africa	2.5	3.8	7.1	7.0	5.7	0.9
	West Africa	3.3	5.3	4.7	4.4	4.7	2.3
	Sub-Saharan Africa	3.0	4.6	5.7	5.5	5.4	2.2

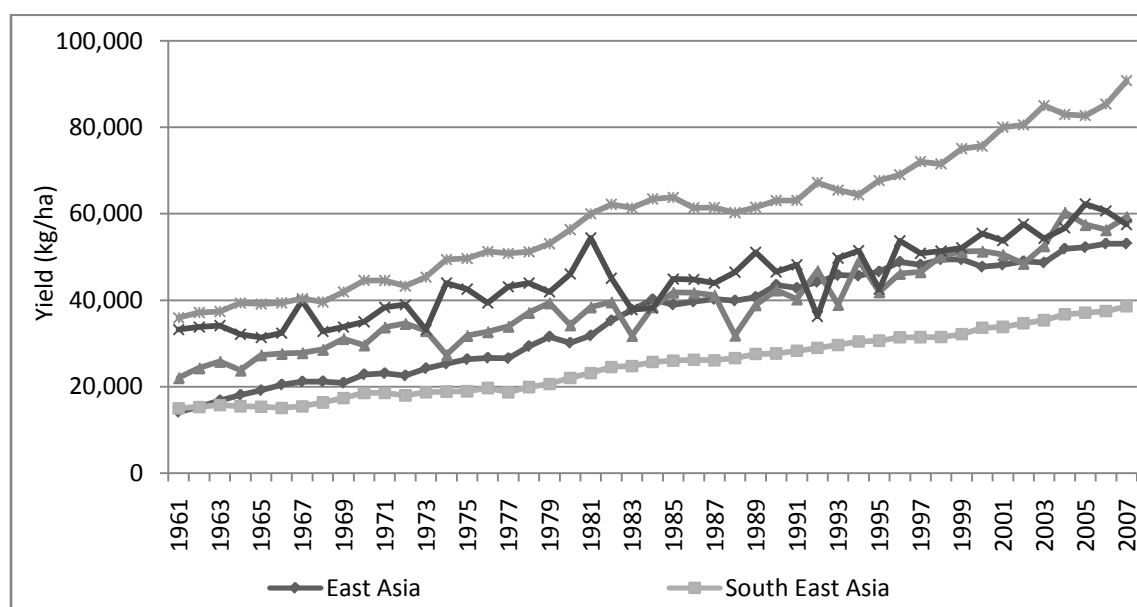
Source: World Bank 2009.

Note: GDP growth for 2009 is from IMF 2009.

## Agricultural Production and Productivity

Future growth in African agriculture will largely depend on the continent's ability to increase agricultural production and productivity. Higher agricultural production on the continent can improve food security and dampen the effects of high international food prices on domestic markets. Due to increasingly limited land resources, however, increasing production largely depends on increasing agricultural productivity. Cereal yields in Sub-Saharan Africa have improved over time, but they are still below what is needed to feed a growing population (Figure 18). Using a regionwide multimarket model, a recent IFPRI study projects that doubling the productivity of food staples in Africa by 2015 has the potential to raise average GDP growth to 5.5 percent per year, to lift more than 70 million people out of poverty, and to turn Africa from a food-deficit region to a surplus region with 20 to 40 percent lower food prices (Diao, Fan, Headey, Johnson, Nin Pratt and Yu . 2008).

**Figure 18. Cereal yields of world regions, 1961–2007**

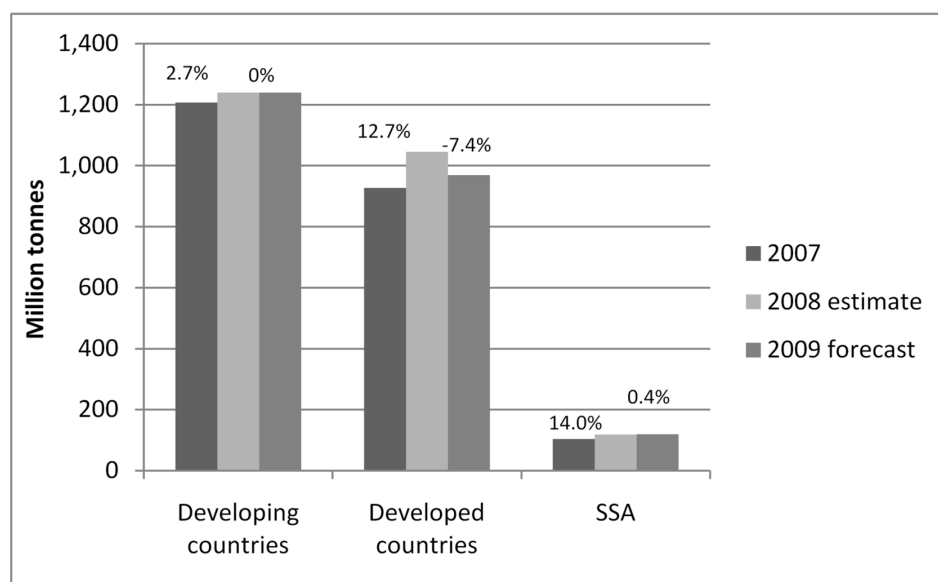


Source: FAO 2009c.

The recent food price crisis is a potential opportunity that could promote a supply response in agriculture. Indeed, as a result of higher food prices (see Section 2), world cereal output actually increased by 7 percent between 2007 and 2008 (FAO 2009b). This supply response, however, was mostly concentrated in developed countries; among developing countries, it was seen in Brazil, China, and India (FAO 2009e). Yet even in Sub-Saharan Africa, FAO projections indicate that cereal production increased by 14.0 percent from 2007 to 2008 (Figure 19). Within Sub-Saharan Africa, this increase was concentrated in Southern and West Africa, with minimal supply response occurring in East and Central Africa (Figure 20). However, Sub-Saharan Africa has such a low level of output compared to other world regions that this increase still does not put it at the same production level as the world's major cereal producers.

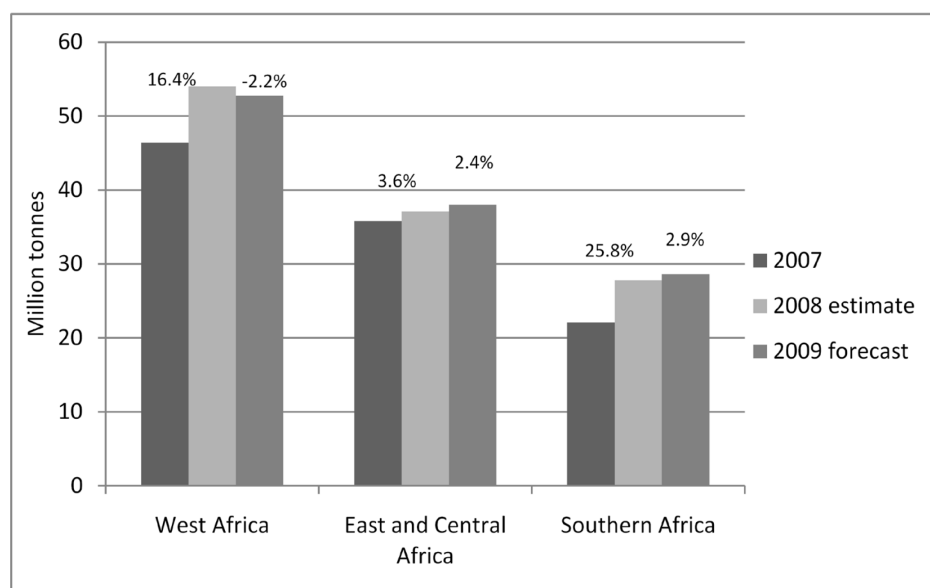
Global cereal output figures are expected to show a decline for 2009 as a result of falling world food prices, yet in Sub-Saharan Africa they are expected to increase by 0.4 percent (FAO 2009e). In part, this difference may have been because of the lag in high food price transmission from the international markets to the domestic markets in many African countries (see Section 2). In 2009, cereal production was projected to continue increasing, albeit at a slower rate in Southern Africa and East and Central Africa. Yet production was also predicted to decline in 2009 for West Africa by approximately 2 percent.

**Figure 19. Cereal production in developing and developed countries and in Sub-Saharan Africa, 2007–2009**



Source: FAO 2009e.

**Figure 20. Cereal production in African regions, 2007–2009**



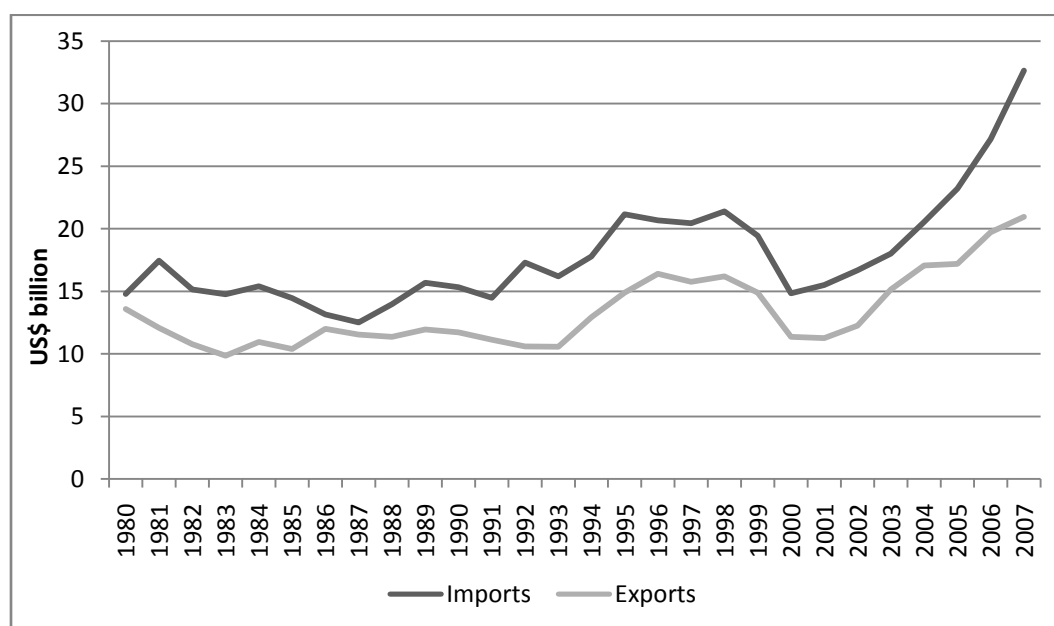
Source: FAO 2009b.

## Agricultural Trade

Increasing agricultural production and productivity will not instigate growth and poverty reduction if farmers do not also have access to domestic, regional, and international markets for trade. Access to markets is still severely limited in Sub-Saharan Africa due to high transportation and market transaction costs.

Sub-Saharan Africa has been a net food importer since the 1980s (Figure 21). In 2007, the value of the region's trade deficit started to increase as a result of higher food prices.

**Figure 21. Agricultural imports and exports in Sub-Saharan Africa, 1980–2006**



Source: FAO 2009c.

Since the early 1990s, the continent has witnessed steadily rising agricultural and overall growth. However, despite recent increases in agriculture GDP growth rates in Africa's different regions and the high diversity of Africa's agroecological conditions for a wide range of agricultural production, only one of the three regions covered in this report (Southern Africa) has achieved the 6 percent agricultural growth target set by CAADP.

Generating higher agricultural growth, particularly in the smallholder sector, would increase rural incomes and food supplies and stimulate broad-based economic growth through linkages with the nonagricultural sector. Agricultural growth, accompanied by growth in nonagriculture, can have a high impact on poverty reduction. There is thus a critical need to accelerate agricultural productivity if African agriculture is to continue performing the way it has in recent years.

For agricultural trade, Sub-Saharan Africa has been a net food importer for decades. The widening food supply-demand gap and the rising food import bills have caused serious setbacks, especially in domestic food production, foreign exchange earnings, and labor force required in agriculture. This gap has also eroded the competitiveness of domestically produced agricultural goods in comparison with low-priced imported goods, leading to reduction in agricultural activities in the continent. Nevertheless, recent years have witnessed dramatic attention on African agriculture because of its immediate and long-term implications for Africa's development. Since the majority of Africans are living in rural areas and engage in subsistence agriculture, which will long remain the main source of their livelihoods, it is pertinent that a renewed interest in agriculture be the main vehicle of reducing poverty in the continent. Therefore, while many African governments are strengthening the focus and implementation of the CAADP strategy through their current CAADP compacts, the strategy for connecting agriculture to poverty reduction needs to be better articulated and operationalized.

## 5. PROGRESS TOWARD MEETING MDG1 IN AFRICA

The continent as a whole is not on track for achieving the first MDG of halving hunger and poverty by 2015. According to our estimates, which project current hunger and poverty rates based on a “business as usual” scenario, the current child malnutrition rate stands at 29.3 percent for Sub-Saharan Africa (Table 7).<sup>6</sup> This rate is an increase from the last measured rate of 27.0 percent in 2008 and is likely to be an overly optimistic estimate, because it does not take into account the crises of the past year. According to the United Nations, the decline in hunger in Sub-Saharan Africa since 1990 reversed in 2008, largely due to the increase in food prices (United Nations 2009a).

Likewise, ReSAKSS estimates of poverty indicate that the continent as a whole is also not on track toward halving poverty by 2015 (Table 7). The continent’s projected poverty rate for 2009 stood at 38.6 percent, which was 9 percentage points above the rate the continent should have reached in 2009 in order to be on track for meeting the 2015 target of 29.0 percent. This figure was based on a “business as usual” scenario, and thus it does not allow for the effects of sudden shocks, such as the global economic crisis, which has likely increased poverty drastically. According to the United Nations (2009a), the number of people living in extreme poverty worldwide in 2009 was expected to be 55 million to 90 million more than anticipated before the current economic crisis; a large share of that population—approximately 16 million—was in Sub-Saharan Africa.

**Table 7. Child malnutrition rates (weight for age) and 2009 MDG1 benchmarks**

Country	Year	Most recent malnutrition rates (various years)	ReSAKSS forecasted rate for 2009	2009 Benchmark	On track to halve hunger by 2015?
Algeria	2006	3.7	2.5	5.8	yes
Angola	2001	30.5	20.1	27.8	yes
Benin	2006	22.6	20.6	20.6	yes
Botswana	2000	12.5	2.2	14.9	yes
Burkina Faso	2006	37.4	38.5	19.6	no
Burundi	2005	39.2	34.5	35.3	yes
C. African Rep.	2006	28.5	38.2	16.6	no
Cameroon	2004	19.3	20.4	8.2	no
Chad	2004	36.7	35.2	25.4	no
Comoros	2004	24.9	27.4	11.2	no
Congo, D.R.	2007	31.4	30.9	22.1	no
Congo, R.	2005	14.4	14.7	8.2	no
Cote d'Ivoire	2006	20.2	19.3	15.5	no
Djibouti	2006	28.9	30.0	14.2	no
Egypt	2008	7.5	7.4	6.4	no
Eritrea	2002	39.6	38.5	25.7	no
Ethiopia	2005	38.4	35.6	30.4	no
Gambia	2006	20.3	18.5	18.5	yes
Ghana	2008	13.9	13.0	18.7	yes
Guinea	2005	25.8	27.5	12.0	no

<sup>6</sup> ReSAKSS estimates for poverty rates are calculated using data from World Bank (2009) and United Nations (2009a). ReSAKSS calculates the average annual rate of change between years for which data is available and uses this rate to project the current rate assuming this rate of change stayed the same. This projection is referred to as a “business as usual” scenario.

**Table 7. Continued**

<b>Country</b>	<b>Year</b>	<b>Most recent malnutrition rates (various years)</b>	<b>ReSAKSS forecasted rate for 2009</b>	<b>2009 Benchmark</b>	<b>On track to halve hunger by 2015?</b>
Guinea Bissau	2006	19.4	16.0	21.3	yes
Kenya	2003	19.9	18.5	14.3	no
Lesotho	2005	16.6	17.9	9.7	no
Liberia	2007	23.8	23.2	18.2	no
Madagascar	2004	41.9	43.1	24.0	no
Malawi	2006	20.5	19.1	17.5	no
Mali	2006	31.7	29.2	27.9	no
Mauritania	2007	29.8	27.6	30.2	yes
Morocco	2004	10.2	10.7	5.5	no
Mozambique	2003	23.7	21.2	18.0	no
Namibia	2007	17.5	16.3	17.0	yes
Niger	2006	44.4	44.8	26.3	no
Nigeria	2003	28.7	25.5	22.1	no
Rwanda	2005	22.5	20.4	18.7	no
Sao Tome and Principe	2006	9.2	7.4	11.8	yes
Senegal	2005	17.3	16.0	13.8	no
Sierra Leone	2005	30.4	33.0	12.9	no
Somalia	2006	35.6	41.5	2.7	no
South Africa	2003	11.5	13.3	4.8	no
SSA	2008	27.0	29.3	19.9	no
Sudan	2006	31.0	30.2	21.8	no
Tanzania	2005	21.8	19.6	18.5	no
Togo	2006	26.0	28.1	9.2	no
Uganda	2006	20.4	19.0	17.2	no
Zambia	2007	19.3	18.7	15.3	no
Zimbabwe	2006	14.0	17.0	9.4	no

Source: World Bank 2009 and UN 2009a.

Note: Current rates are ReSAKSS estimates based on “business as usual.” 2009 Benchmark rate refers to the rate the country would have to achieve for 2009 if it were on track for halving child malnutrition by 2015.



**Table 8. Poverty rates by country and 2009 MDG1 benchmarks**

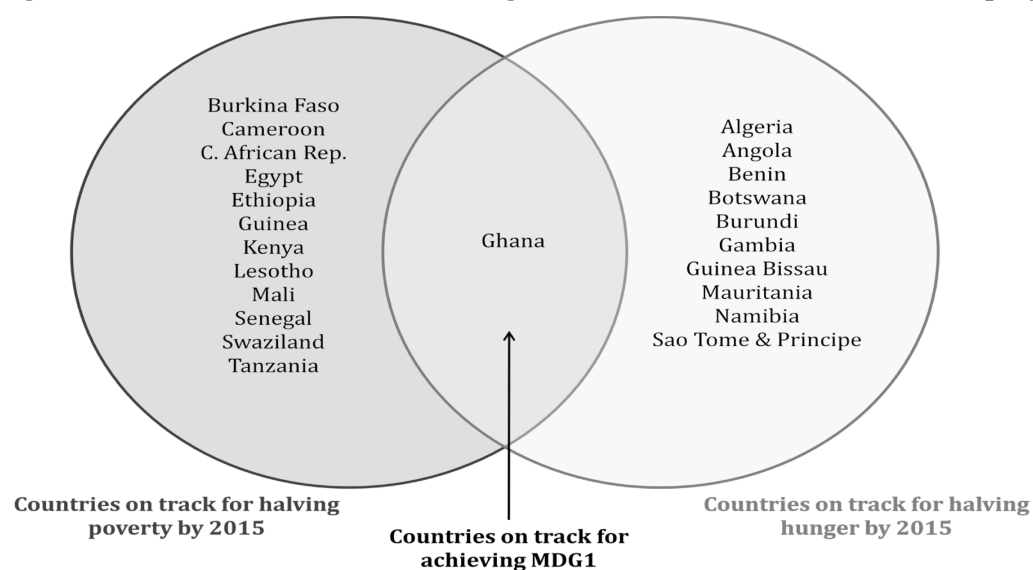
	<b>Most recent poverty rates</b>	<b>Year</b>	<b>ReSAKSS estimated rate for 2009</b>	<b>2009 MDG Benchmark</b>	<b>On track to halve poverty by 2015?</b>
Algeria	-	-	-	4.2	-
Angola	54.3	2000	-	-	-
Benin	47.3	2003	35.3	14.5	no
Botswana	-	-	-	19.3	-
Burkina Faso	56.5	2003	46.7	48.2	yes
Burundi	81.3	2006	80.7	52.5	no
Cameroon	32.8	2001	2.9	45.8	yes
Cape Verde	20.6	2001	-	-	-
Central African Republic	62.4	2003	50.2	55.1	yes
Chad	61.9	2003	-	-	yes
Comoros	46.1	2004	-	-	-
Congo, Dem. Rep.	59.2	2006	-	-	-
Congo, Rep.	54.1	2005	-	-	-
Cote d'Ivoire	24.1	1998	27.6	9.9	no
Djibouti	18.8	2002	35.1	3.0	no
Egypt, Arab Rep.	2.0	2000	1.8	1.8	yes
Ethiopia	39.0	2005	30.4	44.2	yes
Gabon	4.8	2005	-	-	-
Gambia*	61.3	2003	59.8	40.0	no
Ghana	30.0	2006	25.5	33.6	yes
Guinea	70.1	2003	58.9	58.6	yes
Guinea-Bissau	48.8	2002	53.6	25.2	no
Kenya	19.6	1997	13.9	25.6	yes
Lesotho	43.4	2003	35.6	37.4	yes
Liberia	84.0	2007	-	-	-
Madagascar	76.3	2001	66.2	45.7	no
Malawi	73.9	2004	66.2	59.1	no
Mali	51.4	2006	42.7	60.6	yes
Mauritania	21.2	2000	38.0	32.3	no
Morocco	6.2	2001	2.5	1.5	no
Mozambique	74.7	2003	68.1	55.2	no
Niger	65.9	2005	63.8	45.8	no
Nigeria	64.4	2004	93.7	27.9	no
Rwanda*	60.3	2000	72.0	29.3	no
Senegal	44.2	2001	25.3	27.2	yes
Sierra Leone	53.4	2003	49.1	38.9	no
South Africa	10.7	2001	28.6	14.6	no
Swaziland	62.8	2001	41.7	56.9	yes
Tanzania*	35.7	2001	33.4	42.5	yes
Togo	38.7	2006	-	-	-

**Table 8. Continued**

	Most recent poverty rates	Year	ReSAKSS estimated rate for 2009	2009 MDG Benchmark	On track to halve poverty by 2015?
Tunisia	2.6	2000	8.2	3.7	no
Uganda	60.5	1999	45.8	45.2	no
Zambia	62.1	1996	64.9	38.9	no
Zimbabwe*	34.9	1996	58.6	14.9	no
SSA	41.1	2004	38.6	29.0	no

Source: World Bank 2009. Note: 2009 poverty rates are ReSAKSS estimates based on “business as usual” scenarios. 2009 Benchmark rate refers to the rate the country would have to achieve for 2009 if it were on track for halving child malnutrition by 2015.

This SSA continental picture masks the varied performance of different regions and countries in meeting the MDG1 targets. Figure 22 indicates that several countries are on track to achieve either the hunger or the poverty target of MDG1. Thirteen countries are on track to halve poverty by 2015 while eleven are on track for meeting the hunger goal. However, only one country – Ghana – is on track to halving both components of MDG1.

**Figure 22. Countries on track for meeting MDG1 based on “business as usual” projections**

Source: ReSAKSS based on World Bank 2009.

### Increasing Agricultural Growth for Poverty Reduction

ReSAKSS helped facilitate a number of country studies in Africa. These studies provide evidence that supports the argument that increasing agricultural growth to achieve CAADP’s 6 percent agricultural growth target can have significant beneficial effects on poverty, food security, and overall economic growth, even for countries already on track to meeting the first MDG of halving poverty by 2015.<sup>7</sup>

Table briefly displays the results of these ReSAKSS country studies. Most countries will need to increase agricultural growth beyond 6 percent in order to halve poverty by 2015. The annual growth rate of agricultural expenditures required to merely achieve a 6 percent annual agricultural growth rate is quite

<sup>7</sup> See, for instance, Benin, Thurlow, Diao, Kalinda and Kalinda 2008 or Thurlow 2008.

significant. Therefore, most of these countries will need to dramatically increase their investment allocations to agriculture if they plan to achieve the CAADP growth rate or MDG goals. The studies also found that focusing on staple crops, especially cereals, as well as some export crops, can have a much higher effect on both growth and poverty reduction.

**Table 9. Results of CAADP and MDG scenarios**

Country	On track to halve poverty by 2015?	Will CAADP 6% Ag growth put country on track to halve poverty by 2015?	Annual agricultural growth rate required to halve poverty by 2015	Annual growth rate of public agricultural spending to achieve CAADP 6% agriculture growth	
				Optimistic estimate	Conservative estimate
Ghana	Yes	N/A but will put Ghana on track to middle-income country status.	Current average is 4.2%		
Malawi	No	No	6.90%	19.30%	26.30%
Mozambique	No	Yes	6%		
Rwanda	No	No	9%	15.20%	30.30%
Uganda	No	N/A but will lead to higher poverty reduction and reverse trend of increasing absolute number of people in poverty.	Current average is 2.7%	25.30%	30.00%
Zambia	No	No	9.20%	7.20%	26.50%

Sources: Breisinger, Diao, Thurlow, and Al-Hassan 2008; Benin, Thurlow, Diao, Kalinda and Kalinda 2008; Benin, Thurlow, Diao, Kebba and Owfondo 2008; Benin, Thurlow, Diao, McCool and Simtowe 2008; Diao, Fan, Kanyarukiga and Yu . 2008.

### *Malawi, Rwanda, and Zambia*

Three countries in the Common Market for Eastern and Southern Africa (COMESA) region—Malawi, Rwanda and Zambia—serve as good examples of the significant benefits that achieving the CAADP’s target agricultural growth rate can bring, even when these targets do not translate into poverty reduction in line with MDG1.

For example, achieving the 6 percent target will substantially reduce the number of people living below the poverty line by 2015. In Zambia, national poverty would fall from 68 to 52 percent by 2015, whereas in Malawi it would fall from 47 to 35 percent. Even more impressive poverty reduction would occur in Rwanda—from 59 percent to 42 percent by 2015. These results will be feasible if the countries realize reasonably ambitious improvements in crop yields and subsector growth.

These benefits would result even though all three countries will fall short of achieving the MDG1 target of halving poverty by 2015 and will actually witness an increase in the absolute number of poor people. In all three cases, the 6 percent agricultural growth target is also insufficient to elicit the scale of poverty reduction necessary to meet MDG1. To do so, the sector would need to grow by approximately 9 percent per year in Rwanda and Zambia and by 6.9 percent per year in Malawi.

## *Mozambique*

Like Rwanda, Malawi, and Zambia, Mozambique's current growth path does not put it on track to achieve MDG1. However, achieving the CAADP's 6 percent agricultural growth rate target will allow Mozambique to reach the MDG1 goal of halving poverty by 2015. Reaching this target is feasible, as Mozambique already has strong agricultural performance and therefore will require less additional growth in crop production. In fact, with the right investments, Mozambique could surpass the CAADP target and reach an average agricultural growth rate of 6.6 percent from 2006 to 2015. This growth would increase overall GDP growth from 6.3 to 7.0 percent per year, would reduce national poverty to 32.6 percent by 2015, and would lift an additional 1 million people above the poverty line by 2015. Under the CAADP scenario, Mozambique would meet MDG1 sometime in 2014.

## *Ghana and Uganda*

Ghana is already on track to achieving MDG1, even though it is not currently achieving the CAADP target of 6 percent annual agricultural growth. Achieving an accelerated agricultural growth of 6 percent per year would have a significant impact on poverty reduction in Ghana and Uganda. In Uganda, the poverty rate will be halved sometime before 2015; however, due to an increasing population, there will actually be a larger absolute number of people in poverty. Accelerating agricultural growth would reverse this trend and lift an additional 2.9 million Ugandans above the poverty line. In Ghana, 6 percent agricultural growth would put the country on track to becoming a middle-income country by 2015 and would also reduce the number of people in poverty. Therefore, even for countries set to meet MDG1, CAADP can further facilitate income growth and poverty reduction.

## **What Impact Will the Recent Food Crisis Have on Poverty and Hunger Reduction?**

Having reviewed recent performance in the agricultural sector and resource commitments, it is clear that progress has been made. However, has it been enough to enable countries to move closer to the CAADP targets and MDG1, especially in the current international economic context?

The recent food price crisis may have set back earlier progress toward poverty and hunger reduction in Sub-Saharan Africa. High and volatile food prices threaten the nutrition and food security of the poor, because they erode the already limited purchasing power of those people (von Braun 2008a). The proportion of undernourished people in Sub-Saharan Africa increased by 1 percent in 2007 due to the increased food prices. This represents a change from 1995–1997, when the proportion of undernourished people decreased by 4 percent, and from 2003–2005, when the proportion only marginally increased (FAO 2008). Most farmers in Africa are net buyers of food; in the face of such high food prices, they must shift their spending away from education and healthcare, or even sanitation and heating, toward food, of which they must consume a lower quality and quantity. In other countries, the poor have had to make major shifts in their livelihood strategies. For example, in Mauritania, goatherds have been forced to sell their livestock for money to buy food, resulting in both a livestock glut in the market (and thus unusually low prices) and an erosion in families' livelihoods, because their main source of sustenance is gone (Faiola 2008).

The financial crisis may have exacerbated this situation for many poor people by shrinking employment and further lowering real wages. These changes further reduce the amount of income available to spend on food, resulting in worsening malnutrition. At the same time, funding for social protection and food aid programs, which protect many of the most vulnerable from slipping into starvation, are limited due to the credit crunch. Furthermore, the coping strategies employed by the poor in Africa may have increased their vulnerability, as many had to sell off what little productive assets they owned.

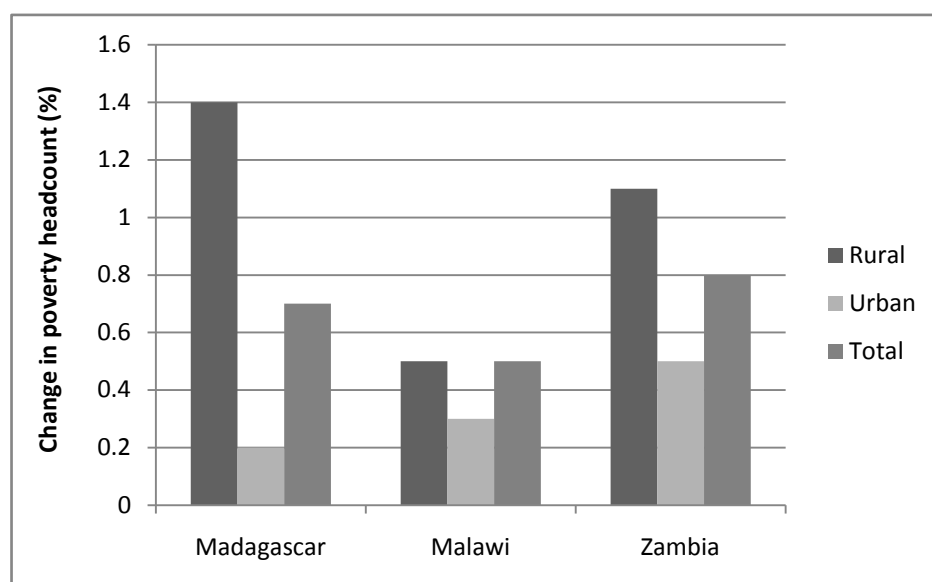
In 2008, a range of scientific studies attempted to assess the impacts of rising food prices on household poverty, including Ivanic and Martin's (2008) 9-country study, Zezza et al.'s (2008) 11-country study, Wodon et al.'s (2008) study of 12 West African countries, and Dessus et al.'s (2008) study

of the urban sector of 73 developing countries. Because none of these experiments incorporated actual price changes, their simulations tell us who *would* be vulnerable to rising prices, but not which populations are *actually* experiencing hardship as a result of rising food prices. This is an important caveat because, as we have seen, food price inflation has varied greatly across countries.

Figure 23 shows the results from Ivanic and Martin (2008), depicting the impact on rural and urban poverty of a food inflation rate of 10 percent. The authors found that under this scenario, rural poverty increases by three times as much as urban poverty in Zambia, almost twice as much in Malawi, and about seven times as much in Madagascar. One quite worrying finding to come out of this research is that a surprising number of African households seem to be net consumers of food, even though they are residing in rural areas and are presumably involved in agriculture. Since poor households often produce food as well as consume it, the impact of food inflation on household welfare depends on whether a household is a net food consumer or a net food producer. Rising food prices will hit net-consuming households adversely but the size of the impact will vary according to the degree to which the households are net consumers of food. The results from the studies listed above imply that many agricultural producers in Africa's rural areas are producing too little, or have too low of productivity, to have enough surplus to sell.

Clearly, a range of factors influences the vulnerability of households to rising food prices within and across countries. Zezza et al. (2008) go further than the other simulation studies by disaggregating vulnerability across groups. In 13 developing countries around the developing world, the authors found that the most vulnerable households have the following characteristics: they are urban or rural nonfarm; the families are larger and less educated; they are more dependent on female labor; they are less well served by infrastructure; and, within the rural sector, they have limited access to land and modern agricultural inputs. The authors also found that reductions in welfare are highest among the poorest households, a result driven by the higher food shares in the budgets of poor households and their low levels of food production.

**Figure 23. Increase in US\$ per day poverty headcount after a 10% increase in food prices, by region**



Source: Ivanic and Martin 2008.

To summarize, these studies suggest that poverty (including rural poverty) will generally increase in the short run if food prices rise substantially. Zezza et al. (2008) offered further insights into which types of households are most vulnerable to rising food prices. It is important to remember the limitations of these simulations. Actual food inflation rates vary substantially across countries. In addition, fuel inflation can have a large impact on household welfare, not least because fuel inflation has large adverse multiplier effects on a number of sectors in the economy, including the food sector (Arndt et al. 2008). We also still need to learn more about the effects that the 2008 food crisis had on malnutrition, especially since even relatively short increases in malnutrition can have long-lasting effects on childhood health and education outcomes.

## 6. CONCLUSION AND POLICY RECOMMENDATIONS

This paper has summarized the trends exhibited in Africa's agriculture sector during the recent past. Overall, progress has been made in most areas of Africa's agricultural development. However, the setbacks from the food price crisis, followed immediately by the financial crisis, are still not completely clear, due to a slow transmission of these effects into domestic markets and varied responses.

There has been growing momentum toward putting agriculture firmly on the agenda of both governments and donors. The increased attention to agriculture's role in development, as well as the critical need to increase financial and technical support to agriculture, has led to an increase in government and donor commitments to the sector. Yet, as this report has shown, these pledges have yet to translate into increased spending in the majority of African countries. Only eight countries have met the CAADP's 10 percent budgetary allocation to agriculture. Thus, governments and donors will not only need to increase their financial commitments to agriculture in general terms, but will also need to carefully select policy, growth, and investment options that will reduce poverty and catalyze overall economic growth. In addition, countries will have to focus on the efficiency and quality of investments in order to ensure that allocated funds are being used effectively and are targeted to areas with the highest returns, such as rural infrastructure, agriculture research and development, and irrigation.

Agricultural policies and programs must now take into consideration the complex combinations of factors, such as more volatile food markets and prices, market distortions, and climate change. To do so, we recommend a two-level approach that focuses on (1) short-term coping strategies that protect the poor without distorting the domestic food economy and (2) long-term "resilience" measures that allow farmers to take advantage of production incentives while also stabilizing the economy to prevent vulnerability to future crises and price variability. Donors can assist by "helping African countries meet the higher foreign exchange and budgetary resource requirements, while avoiding distortionary interventions in the sector" (Badiane 2008, 4).

It is important to emphasize the significance of continued and increased investments in the agricultural sector in order to avoid the return of the food crisis with a vengeance. In the new international economic environment, if agricultural investments taper off due to shrinking available credit, food production will contract even further, which could lead to future food price spikes (von Braun 2008a). This time, however, because poor people are making lower wages (due to the reduced production that accompanies a recession), the effects will be more severe. If, however, agricultural investments are maintained during the recession, African countries can avoid many of the negative effects of slower growth.

## REFERENCES

- Arndt, C., R. Benfica, A. Nucifora, and J. Thurlow. 2008. *Higher fuel and food prices: Impacts and responses for Mozambique*. Unpublished manuscript. Copenhagen: Development Economics Research Group, University of Copenhagen, forthcoming.
- Badiane, O. 2008. *Sustaining and accelerating Africa's agricultural growth recovery in the context of changing global food prices*. IFPRI Policy Brief 9. Washington, D.C.: International Food Policy Research Institute.
- Benin, S., and J. Randriamamonjy. 2008. *Reaching middle-income status in Ghana by 2015: What are the constraints and opportunities for raising agriculture productivity?* IFPRI Ghana Strategy Support Program Working Paper 5. Washington, D.C.: International Food Policy Research Institute.
- Benin, S., J. Thurlow, X. Diao, H. Kalinda, and T. Kalinda. 2008. *Agricultural growth and investment options for poverty reduction in Zambia*. ReSAKSS Working Paper 19. Washington, D.C.: International Food Policy Research Institute.
- Benin, S., J. Thurlow, X. Diao, A. Kebba, and N. Owfondo. 2008. *Agricultural growth and investment options for poverty reduction in Uganda*. ReSAKSS Working Paper 17. Washington, D.C.: International Food Policy Research Institute.
- Benin, S., J. Thurlow, X. Diao, C. McCool, and F. Simtowe. 2008. *Agricultural growth and investment options for poverty reduction in Malawi*. ReSAKSS Working Paper 18. Washington, D.C.: International Food Policy Research Institute.
- Benson, T., N. Minot, J. Pender, M. Robles, and J. von Braun. 2008. *Global food crises: Monitoring and assessing impact to inform policy responses*. Food Policy Report, Washington, D.C.: International Food Policy Research Institute.
- Breisinger, C., X. Diao, J. Thurlow and R. M. Al-Hassan. 2008. *Agriculture for development in Ghana: New opportunities and challenges*. ReSAKSS Working Paper 16. Washington, D.C.: International Food Policy Research Institute.
- Dessus, S., H. Santiago, and R. de Hoyos. *The impact of food inflation on urban poverty and its monetary cost : some back-of-the-envelope calculations*. World Bank Policy Research Working Paper 4666. Washington, D.C.: World Bank.
- Diao, X., S. Fan, D. Headey, M. Johnson, A. Nin Pratt, and B. Yu. 2008. *Accelerating Africa's food production in response to rising food prices: Impacts and requisite actions*. IFPRI Discussion Paper 00825. Washington, D.C.: International Food Policy Research Institute.
- Diao, X., S. Fan, S. Kanyarukiga and B. Yu. 2008. *Agricultural growth and investment options for poverty reduction in Rwanda*. ReSAKSS Working Paper 21. Washington, D.C.: International Food Policy Research Institute.
- Diao, X., P. Hazell, D. Resnick, and J. Thurlow. 2007. *The role of agriculture in development: Implications for Sub-Saharan Africa*. Research Report 153, Washington, D.C.: International Food Policy Research Institute.
- Faiola, A. 2008. Where every meal is a sacrifice. *Washington Post*, April 28.
- Famine Early Warning System Network (FEWSNET). 2009. USAID. <<http://www.fews.net>>. Accessed August 2009.
- Fan, S., M. Johnson, A. Saurkar, and T. Makombe. 2008. *Investing in agriculture to halve poverty by 2015*. Discussion Paper 00751. Washington, D.C.: International Food Policy Research Institute.
- Fan, S., X. Zhang, and N. Rao. 2004. *Public expenditure, growth, and poverty reduction in rural Uganda*. Development Strategy and Governance Division Discussion Paper 4. Washington, D.C.: International Food Policy Research Institute.
- Food and Agriculture Organization of the United Nations (FAO). 2008a. *International commodity prices database*. <<http://www.fao.org/es/esc/prices>>.



- \_\_\_\_\_. 2008b. *The state of food insecurity in the world 2008: High food prices and food security—Threats and opportunities*. Rome.
- \_\_\_\_\_. 2009a. *Crop prospects and food situation*, no. 1. Rome.
- \_\_\_\_\_. 2009b. *Crop prospects and food situation*, no. 3. Rome.
- \_\_\_\_\_. 2009c. FAOSTAT. <<http://faostat.fao.org>>. Accessed October 2009.
- \_\_\_\_\_. 2009d. *Food outlook: Global market analysis*. Rome.
- \_\_\_\_\_. 2009e. *The state of agricultural commodity markets*. Rome.
- Govere, J., E. Malawo, T. Lungu, T. Jayne, K. Chinyama, and P. Chilonda. 2009. *Trends and spatial distribution of public agricultural spending in Zambia: Implications for agricultural productivity growth*. Food Security Working Paper 36. The Regional Strategic Analysis and Knowledge Support System—Southern Africa. Pretoria.
- Headey, D., and S. Fan. 2008. Anatomy of a crisis: The causes and consequences of surging food prices. *Agricultural Economics* 39 (supplement): 375–391.
- International Monetary Fund (IMF). 2008. *International Financial Statistics (IFS)*. Washington D.C.
- \_\_\_\_\_. 2009. *World economic outlook: Sustaining the recovery*. Washington, D.C.
- Ivanic, M., and W. Martin. 2008. Implications of higher global food prices for poverty in low-income countries. *Agricultural Economics* 39 (supplement): 405–416.
- Johnson, M., B. Omilola, K. Flaherty, T. Makombe, M. MacNeil, and L. Horowitz. 2008. *ReSAKSS annual trends report 2008: Monitoring agricultural sector performance, growth, and poverty in Africa*. Washington, D.C.
- Macharia, E., S. Gbegbelegbe, J. Wanjiku, and J. Karugia. 2009. *Food prices: Eastern and Southern Africa defy trends*. ReSAKSS Issue Brief 12. Washington, D.C.: The Regional Strategic Analysis and Knowledge Support System.
- Minde, I. J., P. Chilonda, and H. Sally. 2008. *Rising global food prices—Policy challenges and options for Southern Africa*. ReSAKSS Issue Brief 6. Washington, D.C.: The Regional Strategic Analysis and Knowledge Support System.
- Mogues, T., M. Morris, L. Freinkman, A. Adubi, and S. Ehui. 2008. *Agricultural public spending in Nigeria*. IFPRI Discussion Paper 789. Washington, D.C.: International Food Policy Research Institute.
- Montero, D. 2008. Financial crisis may worsen food crisis it eclipsed. *Christian Science Monitor* (December 2).
- New Partnership for Africa's Development (NEPAD). 2005. *Comprehensive Africa Agricultural Development Programme country-level implementation process*. Concept Note. NEPAD Implementation Retreat Outcomes (October 24–25). Pretoria, South Africa: New Partnership for Africa's Development.
- Ngongi, N. 2008. Policy implications of high food prices for Africa. In *Responding to the global food crisis: Three perspectives*, eds. J. von Braun, J. Sheeran, and N. Ngongin. Washington, D.C.: International Food Policy Research Institute.
- Njiwa, D., I. Kumwenda, I. Thindwa, P. Chilonda, F. Olubode-Awosola, and A. Davids. 2008. *Monitoring trends in public spending on agriculture: The case of Malawi*. ReSAKSS-SA Working Paper 9. International Crops Research Institute for the Semi-Arid Tropics (ICRISAT), International Food Policy Research Institute (IFPRI), and International Water Management Institute (IWMI).
- Organization for Economic Cooperation and Development (OECD). 2009. *Credit Reporting System (CRS)*.
- Quisumbing, A., R. Meinzen-Dick, and L. Bassett. 2008. *Helping women respond to the global food price crisis*. IFPRI Policy Brief 7. Washington, D.C.: International Food Policy Research Institute.
- Thirtle, C., L. Lin, and J. Piesse. 2003. The impact of research-led agricultural productivity growth on poverty reduction in Africa, Asia, and Latin America. *World Development* 31(12): 1959–1975.

- Thurlow, J. 2008. *Agricultural growth and investment options for poverty reduction in Mozambique*. ReSAKSS Working Paper 20. Washington, D.C.: International Food Policy Research Institute.
- United Nations. 2009a. *United Nations Millennium Development Goals Report*. New York.
- \_\_\_\_\_. 2009b. United Nations National Accounts Database.
- von Braun, J. 2008a. *Food and financial crises: Implications for agriculture and the poor*. Food Policy Report 20, Washington, D.C.: International Food Policy Research Institute.
- \_\_\_\_\_. 2008b. Has the food crisis abated? (Interview by David Biello) *Scientific American*, December 15.
- von Braun, J., A. Ahmed, K. Asenso-Okyere, S. Fan, et al.. 2008. *High food prices: The what, who, and how of proposed policy actions*. IFPRI Policy Brief. Washington, D.C.: International Food Policy Research Institute.
- Wodon, Q. and H. Zaman. *Rising Food Prices in Sub-Saharan Africa: Poverty Impact and Policy Responses*. World Bank Policy Research Working Paper 4738. Washington, D.C.: World Bank.
- World Bank. 2008. *Country Policies in Africa*.  
<[http://siteresources.worldbank.org/NEWS/Resources/risingfoodprices\\_chart\\_apr08.pdf](http://siteresources.worldbank.org/NEWS/Resources/risingfoodprices_chart_apr08.pdf)>. Accessed August 2009.
- \_\_\_\_\_. 2009. *World Development Indicators*.
- Zeza, A., B. Davis, C. Azzarri, K. Covarrubias, L. Tasciotti, and G. Anriquez. 2008. *The impact of rising food prices on the poor*. Unpublished manuscript. Rome: Food and Agriculture Organization, forthcoming.

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